GAME CHANGERS: TAXES, TARIFFS, TRADE AND TRUMPONOMICS

ECONOMIC OUTLOOK AND FORECASTS:

The Nation, Southern California and Orange County

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GAME CHANGER: TEN YEARS AFTER THE FINANCIAL CRISIS

Overview

In the mid-seventeenth century, when Oliver Cromwell became Lord Protector of England, the artistic world appeared to have formed a consensus: The best portraits were those that depicted the subject in the most flattering of lights, stoic and graceful, suppressing blemishes, shortcomings or imperfections. Known for his puritanical disdain for all forms of personal vanity, when Cromwell commissioned his portrait from the courtly painter Sir Peter Lely (whose artistic flair was very much in line with the times), he is reputed to have instructed the artist to paint him as he was, "warts and all."

A decade after the seismic shock of the financial crisis, the time has come to take a clear-eyed view of the economy that has emerged from the ashes of its aftermath and assess its future path, "warts and all." As we wrote 10 years ago: "One thing we can be certain of: when all is said and done, 2008 will have earned a prominent spot in history as the year that fundamentally changed our capital markets and financial system. The US economy is and will continue to undergo a severe economic downturn of historic proportions over the near term. The recovery, which will likely start in mid-2009/early-2010, will be painfully slow and protracted with below-trend growth and above full-capacity unemployment rates."

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We never knew back then how unfortunately accurate that forecast would turn out to be. From 2010 to 2017, real GDP growth averaged a paltry 2.2%, never reaching – let alone exceeding – the 3% long-run historical rate (though 2015 came close with 2.9%). The unemployment rate remained at an elevated level of above 6% until the end of 2014, six full years after the onset of the crisis. Home foreclosures did not come down meaningfully until mid-2016, with nearly 9 million homeowners losing their homes during this time. Single-family housing starts have averaged around 650,000 per year since the start of the recovery, far below the historical average of 1.2 million.

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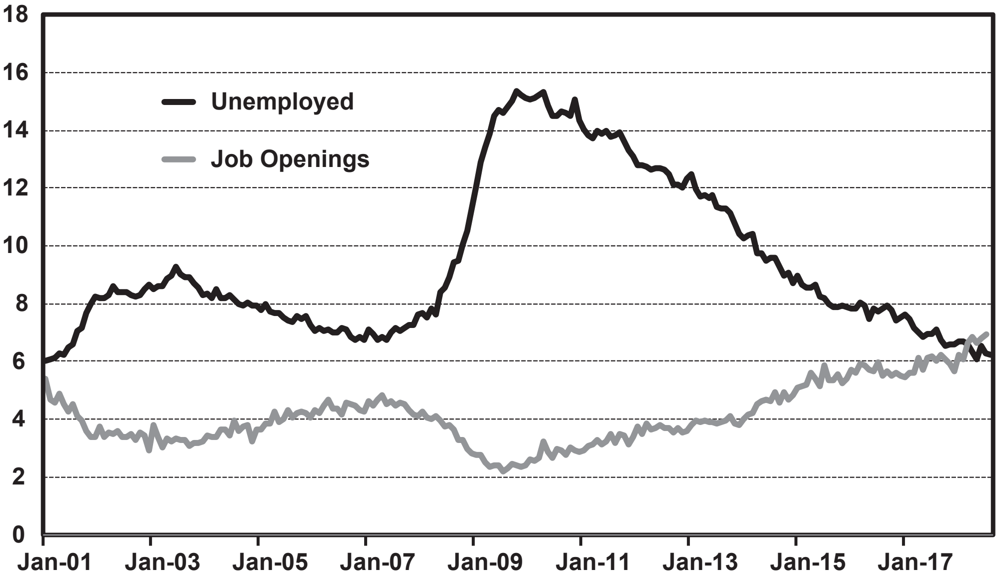
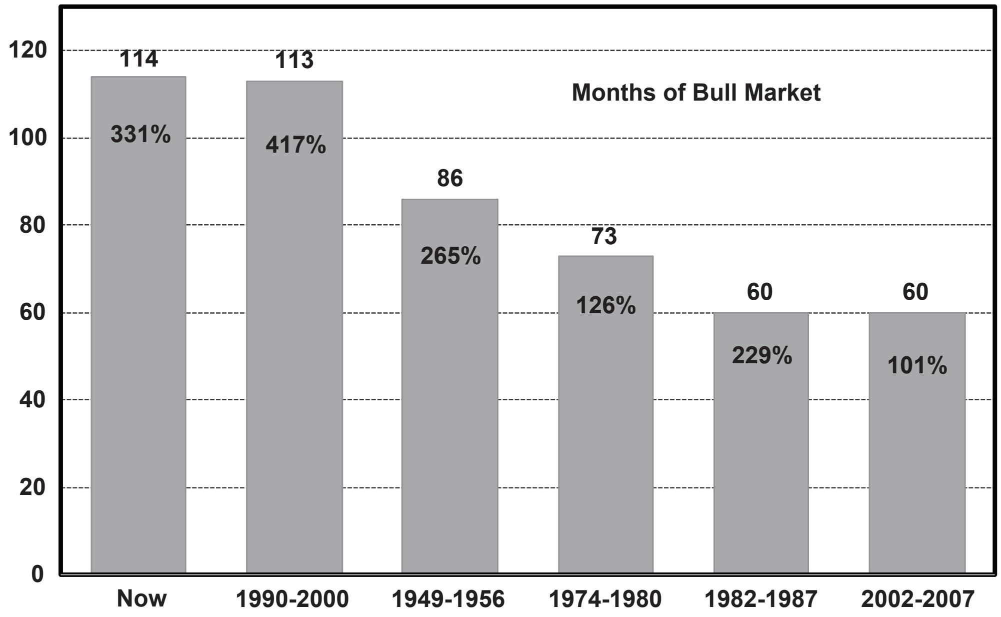
Ten years on, these accounts appear no more than distant memories. Underneath the knobby warts of the recession and the painfully slow recovery, a much brighter, sunnier and more radiant portrait has appeared of an economy that is finally basking in the glory of healthy, robust, organic growth. Take the labor market, where payrolls have swelled at a breakneck pace: in the first nine months of this year, an average of 200,000 jobs were created per month, higher than even last year's healthy pace of 187,000. Demand for labor continues to remain robust and currently outstrips supply: for the first time since the data collection began (in 2000), there are more job openings than there are unemployed workers (Figure 1). The National Federation of Independent Businesses (NFIB), an advocacy group for small- and medium-sized businesses, reports that the biggest problems facing business owners today are not the usual culprits – sales, taxes and government regulation – but the quality of labor. Although this issue presents its own challenges for businesses, not many would argue with the fact that, from a macroeconomic perspective, this is a rather good problem to have.

FIGURE 1
A Sizzling Labor Market: Job Openings Surpass Unemployed Persons (millions, unemployed vs job openings)



Other good news abounds: second quarter real GDP growth came in at a robust 4.2%, the highest in four years. Details beneath the headline numbers were even more heartening, showing a broad-based improvement in consumer spending, business investments and federal outlays. In a comprehensive benchmark revision, the Bureau of Economic Analysis (BEA) reported that income growth was much stronger and the savings rate much higher than previously thought. The stock market surmounted its early-year woes and reached a milestone in mid-August, becoming, at 3,453 days, the longest (albeit the second strongest) bull market in history (Figure 2). Household wealth has touched historical highs. Home equity, which collapsed to merely half its former value in the aftermath of the housing crisis, is now $1.8 trillion above cycle highs set in the heyday of the housing boom. Business and consumer confidence has remained sky high throughout the year: The NFIB shows that small business confidence is the highest it has ever been since it started collecting data in 1983.

FIGURE 2
The Longest Bull Market in History
(duration in months and returns for each cycle)



Against this bright backdrop, concerns about an overheating economy have surfaced. Economists are known to not agree on much, so it is rather shocking to hear the chorus of voices rising in unison about a looming recession, not now but perhaps in 2019 or 2020. Economists predicting a recession is rather surprising; putting a date on it is nothing short of extraordinary. As a group, we are notoriously terrible in predicting turning points in the business cycle, partly because downshifts in growth are driven by intangible elements – such as sentiment – which is inherently unpredictable. Nonetheless, this has not deterred many from pointing to warning signs that this expansion is nearing its end: the flattening of the yield curve, the tightness in the labor market, rising inflation and the potential of fading growth once the fiscal stimulus has run its course.

While we are mindful of these developments, our view is that the current expansion has some more room to run, provided there are no policy mistakes and the long-awaited pick-up in productivity ultimately materializes. To put it differently, the current expansion will certainly meet its maker one day, but that day is further out in the horizon (3-5 years) than what the consensus expects. Yes, things are heating up and spare capacity is getting sparser, but the handwringing and endless fretting about overheating seems to be a bit overdone, at least at this stage. The economy has operated below capacity for so long – it appears we have collectively forgotten how to function with less slack.

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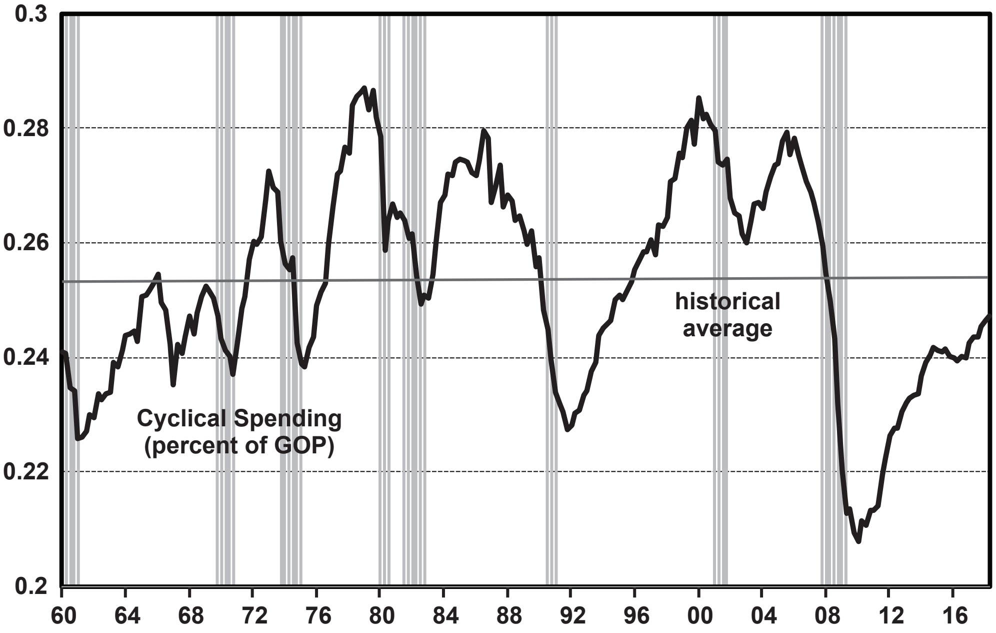
Take, for example, the labor market, where things are indeed tighter and the economy seems to be running against binding constraints. The current unemployment rate of 3.9% is the lowest in nearly five decades, but the labor force, especially in the prime-age demographics, continues to expand at a healthy pace, suggesting that all slack has not been completely mopped up. Various measures of inflation have ticked up and are running at around 2% annual pace, the level with which the Fed is comfortable, but given that inflation undershot its target for nearly five straight years, some payback is not unexpected. More importantly, the usual suspects that tend to overheat at the peak of a business cycle are conspicuously absent: Household debt has dropped from an all-time high of

98% of GDP to 75%; consumer balance sheets are in pristine shape; and cyclical indicators (such as durable good purchases and business fixed investments, commonly known to denote turning points) are within historical norms and well below cycle-high peaks (Figure 3).

FIGURE 3
Cyclical Spending Shows No Overheating
(consumer spending on durables and business investment, % of GDP)



But risks are certainly building. … The financial system, while sounder in many ways, is still very fragile. Risk did not disappear but simply morphed and was reshuffled from the banking sector to other unregulated or under-regulated areas such as "shadow banks" and asset management firms.

Having said that, risks are certainly building. Nonfinancial corporate debt is at an all-time high, with much of this debt BBB-rated, just a notch above junk ($3 trillion, to be precise). Leveraged loan volumes are setting records growing at a double-digit pace over the past five years to nearly $1.4 trillion. Underwriting standards for these loans have slipped to levels last seen during the height of the euphoria leading up to the last financial crisis. More broadly, the financial system, while sounder in many ways, is still very fragile. Risk did not disappear but simply morphed and was reshuffled from the banking sector to other unregulated or under-regulated areas such as "shadow banks" and asset management firms, which have now become the true powerhouses of the financial system. There has been less prodding and poking of these financial institutions (compared to banks): Their business models are therefore less stress-tested and less well understood.

Other, more immediate risks are even bigger causes for concern. The synchronized global upswing that played out last year has failed to carry over into 2018. Outside of the U.S., growth around the world has downshifted. Global manufacturing is growing at the weakest pace in almost two years and exports shrank last month for the first time since 2016. Cracks are appearing in emerging market economies, especially those with high levels of dollar-denominated debt, large current account deficits, high and rising inflation, and a sharply depreciating currency.

Some of this has to do with weaker economic fundamentals in different corners of the world. But the biggest culprits are escalating trade conflicts and U.S. monetary tightening. While the U.S. is better positioned to suffer the blows of trade disputes in the short-term, other economies are not. Even the U.S. may feel the brunt more acutely the longer the trade conflicts drag on and the more countries they engulf. An all-out trade war would be quite costly for both U.S. and the rest of the world, even though the pain will not be evenly distributed. And monetary tightening by the Fed presents its own challenges, both domestically and abroad. As the financial world slowly adjusts to higher rates (a distant memory since the crisis), cracks will appear. Higher yields have already caused a repricing of risk in equity markets, and the strengthening of the dollar has wreaked havoc in vulnerable emerging market economies. More is likely to come. And policy mistakes cannot be ruled out this late in the business cycle.

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An all-out trade war or Fed mistakes are not our baseline scenario. While trade skirmishes will likely remain a fixture of the global landscape in the foreseeable future, they are unlikely to flare up into full-blown wars given the high costs to all involved. Short-term, the U.S. economy will heat up, but having endured the pain of the past eight years, it has earned the right to bask in the sun for a while longer.

More Room to Run: The Case for Continued Expansion

After eight long years of agonizing torpor, which numerous economists assured us was a manifestation of “secular stagnation,” the economy has caught a strong second wind. This is not typical this late in the business cycle, but then it is not a usual garden-variety business cycle. Coming at the heels of the deepest recession since the Great Depression, the trauma of the crisis caused a retreat from risk, which tends to drive booms and busts and long-term growth. Consequently, growth has been durable, but slow.

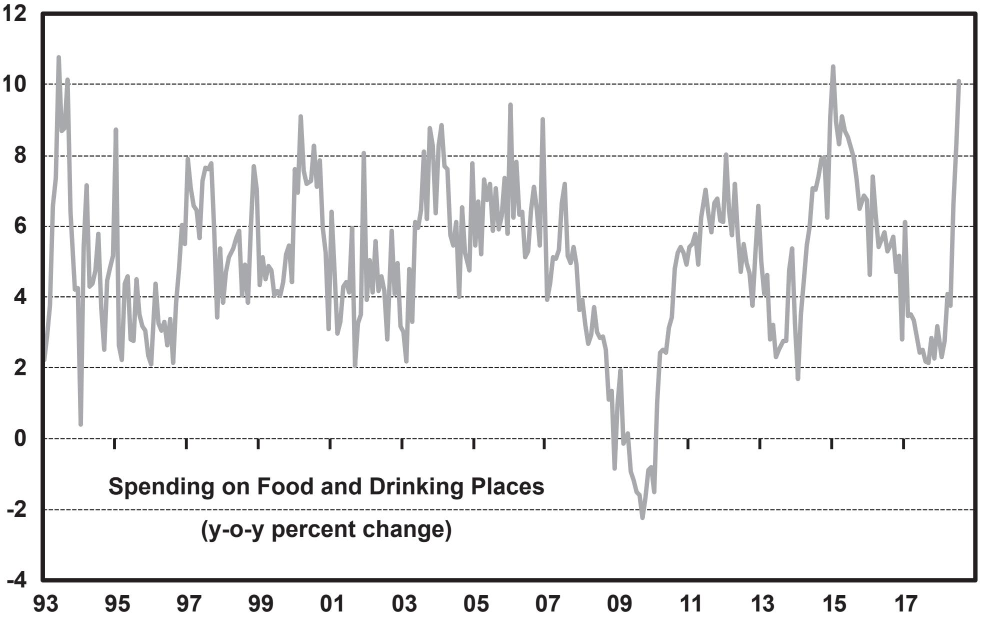
But time heals all wounds, and even the deepest traumas tend to fade as years wear on. The economy is in the best shape it has been in more than 10 years. Real GDP growth was 2.2% in 2017, about the same as the average rate for the recovery, but it has ramped up dramatically this year. Not so much in the first quarter, when, similar to the last few years, growth was slow (it was 2.2% in Q1). However, the second quarter showed an eye-popping 4.2% increase. More importantly, the details were even more heartening: consumer spending is strong and will continue to remain so for the rest of the year; inventories should give an additional boost given their current low levels; business investment will expand at healthy pace. This organic growth is further juiced up by a large dose of fiscal stimulus: a $1.5 trillion tax cut package (over a 10-year horizon) coupled with an additional $1.3 trillion in fiscal spending.

Consumer spending is strong; business investments should expand at a healthy pace, and inventories should give an additional boost to growth. This organic growth is further juiced up by a large dose of fiscal stimulus: a $1.5 trillion tax cut package coupled with an additional $1.3 trillion in fiscal spending.

Of course, growth rates above 4% are not sustainable because the economy’s potential, based on current labor force and productivity growth, probably lies in the range of 2% to 2.5%. And some have pointed to one-off factors as reasons for such stellar performance. The second quarter received a boost from international trade as exports, particularly soybean exports, surged to beat impending tariffs. That is unlikely to be repeated. But we believe that growth has genuinely shifted to a higher gear for the near term, with this trend likely to continue at least over the next couple of quarters. The Atlanta Fed GDPNow model, which tracks GDP in real time, shows a reading for Q3 at a solid 4.2%. Though that number is likely to edge down a bit as more data become available, we expect real GDP to grow by a solid 3.1% in 2018, 2.9% in 2019 and a more trend-line 2.4% in 2020.

Consumer spending has been the rock upon which this expansion was built, propelling the economy even when investment faltered, global trade stumbled and the post-crisis fiscal stimulus waned. Spending rose by a solid 3.8% in the second quarter, far above the dull 0.5% rate registered in the first. Retail sales have been quite robust, and despite a scant 0.1% increase in August (mostly due to a squeeze from higher gas prices and payback from a blockbuster July), they are poised to remain strong for the remainder of the year, especially during the holiday season. Retail sales on food services and drinking places have skyrocketed over the summer months, growing by more than 10% on a year-to-year basis, perhaps indicating a more celebratory mood from U.S. consumers (Figure 4).

FIGURE 4
In a Celebratory Mood: Spending on Food/Drinking at Cycle Highs
(retail sales, food and drinking places, y-o-y percent change)

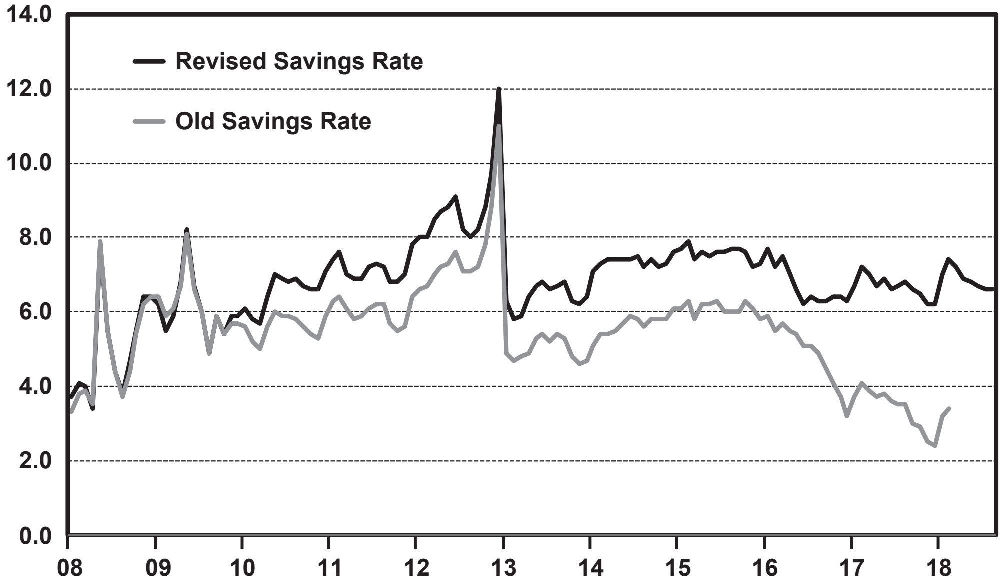


Indeed, consumers have a lot to celebrate and the outlook for consumer spending is solid, underpinned by improving household finances, lower personal tax rates, and gains in employment, real disposable incomes, and home values. As of the second quarter, household net worth had nearly doubled since the height of the financial crisis, rising from $54 trillion in Q1 2009 to nearly $107 trillion. Most of the gains are due to the spectacular rise in equity markets (up nearly $40 trillion since the trough of the crisis) but housing wealth has also more than made up its losses from the epic collapse during the last recession. Indeed, housing wealth is now nearly $1.8 trillion above its pre-recession peak, a fact that has contributed greatly to consumer optimism.

Data revisions on income and savings reinforce the notion that consumers are currently in far better shape to weather any potential downturn than they were in the previous two recessions.

Other good news on the consumer front abound: the BEA has substantially revised up its estimates of income (by $1.3 trillion) and savings in the U.S. economy. The primary culprit was the underreporting of proprietor's income (including interest and dividends) to tax authorities. Small business owners evidently have been faring better during the recovery than what was initially believed though they appear to have been reluctant to share that news with the IRS. Perhaps the most important change was in the savings rate, which due to the revisions more than doubled overnight – from 3.3% to 7.2% (it has edged down to 6.7% at present) (Figure 5). Though these revisions appear to be quite large and by far the most significant since 2002, which creates some skepticism, the new data reinforce the notion that consumers are currently in far better shape to weather any potential downturn than they were in the previous two recessions.

FIGURE 5
Consumers Have Saved Much More than Previously Reported
(saving rate, before and after revisions)



The labor market has been nothing short of spectacular over the past four years, with the U.S. economy adding more than 2.2 million jobs in 2017, following 2.3 million in 2016 and 2.7 million in 2015. Since 2010 when the labor market recovery got underway, nearly 20 million jobs have been added. And the pace does not seem to be ebbing. In fact, job growth has ramped up from a monthly average of 187,000 last year to 200,000 in 2018. This is quite surprising given the mature stage of the business cycle and the fact that the labor market has been white hot for quite some time.

The September labor market report threw some ice on the recent hot trends showing a gain of only 134,000 jobs. Some of the weakness was likely due to Hurricane Florence: around 300,000 workers reported that they were unable to work due to bad weather, compared to an average of 85,000 workers in a typical September. As such, we expect the September number to be subsequently revised higher (September payroll numbers have been revised up by an average of 55,000 jobs over the past few years). Moreover, the previous two months were revised upwards by a combined 87,000 jobs, attesting to the continued strength of the labor market. We expect the labor market to continue to expand over the forecast horizon, albeit at a less rapid clip, adding 195,000 jobs per month this year, 155,000 in 2019 and 120,000 in 2020.

Other labor market indicators are equally upbeat: At a current rate of 3.7%, the unemployment rate is the lowest since December 1969, virtually one generation ago. The broader measure of unemployment (U6), which includes discouraged and marginally attached workers, has declined from a recession high of more than 17% to a current 7.5% (the historical average is 8.7%). There is now less than one unemployed person per job opening. When using the broader labor market utilization measure (those working part time for economic reasons, discouraged and marginally attached workers), the ratio of job opening to the broader market measure is below two, meaning there are two “underutilized” individuals per job opening, a historical low since records began in 2001. We expect the unemployment rate to drift lower over the forecast horizon as the labor market tightens further, averaging 3.9% in 2018, 3.6% in 2019 and reaching 3.4% in early 2020.

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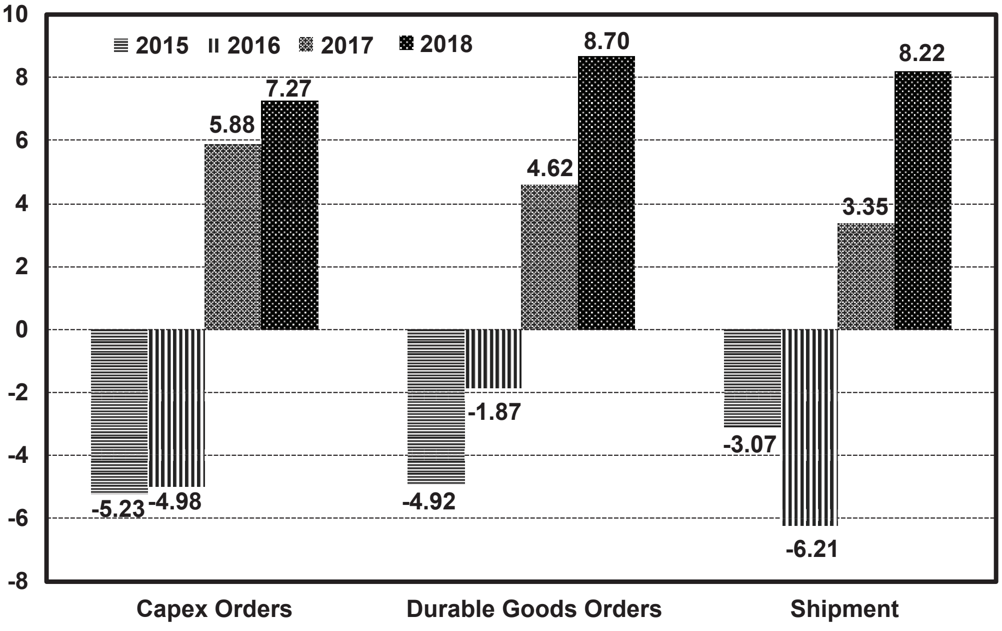
Business investments have also hummed along nicely with the pace accelerating from last year. After growing by a paltry 1.7% in 2016, business fixed investments ramped up to 4.8% in 2017, and are expected to expand at a staggering 7.3% this year. This should not come as a surprise as a number of factors have contributed to a markedly improved environment for investments.

First, as we have argued in this report, the overall outlook for the economy has improved materially, even compared to a couple of years ago. Second, the newly enacted Tax Cut and Jobs Act has significantly altered investment incentives by dramatically lowering the tax burden on corporations and small businesses and changing the expensing requirement for purchasing new machinery and equipment. This has boosted investment in equipment and software (E&S), a sector that has been in slow gear throughout most of this business cycle, leaving many businesses in need of updating plants and equipment, particularly in the face of mounting wage pressures.

Third, the collapse in oil prices in 2014-2015 lopped off a sizable chunk from investment growth, reducing investment in structures by 3% in 2015 and by 5% in 2016. By mid-2016, the rig count had shrunk to a pitiful 400, the lowest in more than seven decades. As oil prices have ratcheted up to around $70 per barrel, investment in mining and rigs has rebounded appreciably, doubling (in real terms) to $130 billion. Indeed, investment in structures rose by double digits in the first half of this year, posting a 13.9% increase in Q1 and an even stronger 14.5% in Q2.

The manufacturing sector has experienced a virtual renaissance after its brush with a near-recession in 2015-2016. The ISM manufacturing index has remained firmly in expansion territory since last year, increasing further this year even as tariffs and the threat of a trade war have dented sentiment somewhat. This trend is expected to continue: a raft of bellwether indicators, such as capital goods orders, durable goods orders and manufacturers' shipment, point to continued robust activity over the next few quarters (Figure 6). In addition, the inventory-to-sales ratio, a leading indicator of industrial production, is at a cycle low indicating that production activity should ramp up further.

FIGURE 6
Healthy Manufacturing Outlook
(orders and shipment, y-o-y percent change, average rate)



Corporate profits surged in the first two quarters of the year, boosted primarily by the Tax Cuts and Jobs Act, which cut the statutory tax rate from 35% to 21%. The new tax law translates into a one-time boost of 20% in after-tax profits for corporations, which has borne out during the first part of the year. Corporate earnings have also skyrocketed to brand new highs, due partially to the tax law and partially to a favorable economic climate. Indeed, S&P 500 earnings were up by more than 20% for the first two quarters and are set to grow by an equal amount in the third quarter. This makes for three straight quarters of growth at 20% or higher, a first in more than seven years.

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Risks and Vulnerabilities to the Outlook

Too Close to the Sun: Has Growth Peaked for this Cycle?

As growth ramps up, propelled by a broad-based expansion in virtually every sector and amped up by a large dose of fiscal support, old complaints from earlier in the decade appear dated. Real median household income is no longer stagnant, and though early gains went to the richest 5% of households, over the past few years as the expansion continued, it is the lower range of the distribution that has seen the largest gains. Business investment is no longer anemic, the structural unemployment rate has not shifted permanently higher, and growth is not moribund. In other words, the sheen seems to have come off ‘secular stagnation,’ the economists’ preferred explanation for the slow growth the recovery experienced during its first eight years of existence.

In fact, the economy is so good the economists have found something else to worry about: overheating. Talk of overheating began in 2016 as the labor market picked up significant steam and the unemployment rate fell below 5%. These folks have some explaining to do: since then, more than 6 million people have been employed. The current unemployment rate of 3.7% has stoked these fears further. Many fret that this is significantly below the NAIRU (non-accelerating inflation rate of unemployment, also considered the rate of full employment), which is widely expected to be around 4.5%. At this rate, they argue, the economy will bump against resource constraints (cue in, we’re running out of people to employ), inflation will pick up, and the Fed will be forced to respond more aggressively by raising rates, thus bringing about the demise of this expansion.

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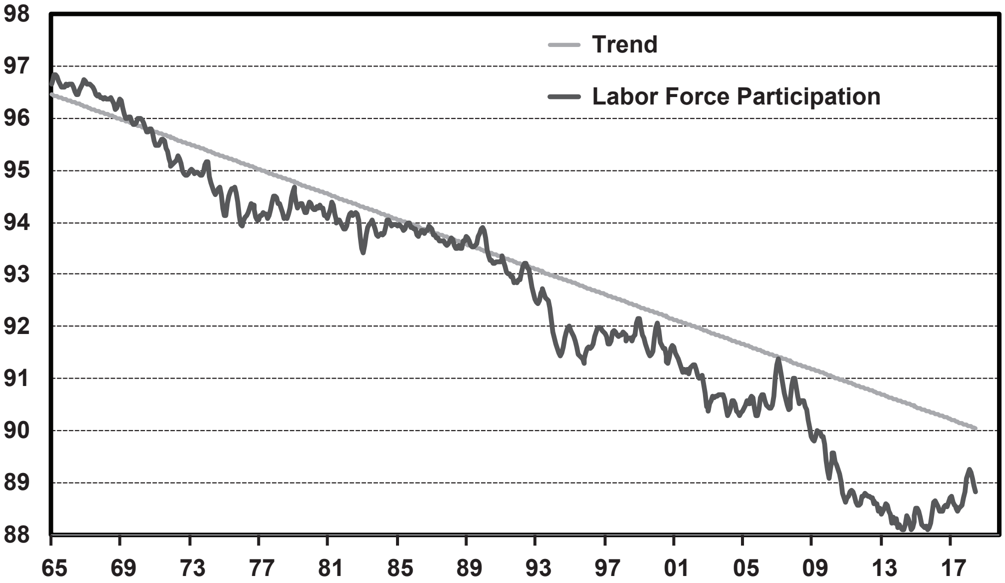
Color us as skeptical, of this point of view, at least for now. First, on a slightly technical point, it does take a lot of hubris to declare that you happen to know what the NAIRU is. Just a couple of years ago, the Fed assured us it was as high as 5%, whereas only recently, Jerome Powell, the Fed chairman, mused about the possibility of it being even lower than 4.5%. Second, and more importantly, though the labor market is getting tight, there still appears to be some more gas in the tank. The labor force participation rate for prime age workers (25-54 years old) has risen by nearly 1 million since January 2017, reversing a five-decade decline for men and nearly a 15-year decline for women. Even after the recent rebound, men’s labor force participation continues to be below the long-term downward trend (Figure 7). Crude calculations show that just in reaching the trend-line, the labor force would expand by roughly 800,000 men. Of course, the numbers are quite more upbeat if the trend is reversed, that is if the decline in participation rates among prime-age men is to experience a reversal from its long-term trend.

FIGURE 7
Labor Force Participation for Prime-Age Men Has Room to Grow
(labor force participation rate, men, 25-54 years old)



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Significantly, inflation – an important factor of the overheating story – is missing, or at least not as present as one would expect if things are truly about to get out of hand. Inflation has certainly picked up since the start of the year partly due to the unwinding of one-off factors (such as the sharp drop in the price of wireless services last spring) and partly due to higher oil prices. Tighter labor markets, an increasing backlog order and an overall stronger pace of growth will certainly put pressure on inflation. But for now, inflation expectations have not become untethered. The five-year forward inflation expectations (derived from 5-year forward rates) and the 10-year inflation breakeven rate (derived from the 10-Year Treasury constant maturity series) are currently hovering in the 2.1% to 2.2% range, hardly out of control.

Part of the reason why inflation has been relatively subdued even though the labor market has been heating up has to do with tepid wage growth. Wage growth has finally picked up: average hourly earnings rose 2.9% in August relative to a year earlier, the sharpest jump since June 2009. But this is nowhere close to the 4% rate we should witness if things are truly overheating. Even the Atlanta Fed wage measure, which is based on continuously employed individuals (and thus tends to be a better gauge of earnings), is growing only at around 3.2%.

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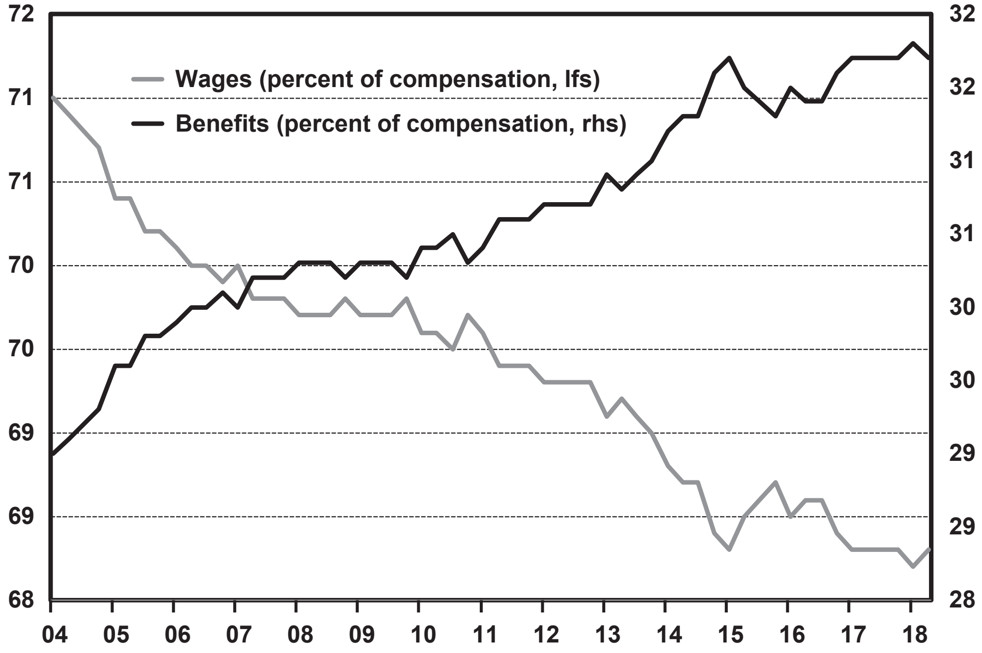
Stubbornly low wage growth has been one of the enduring mysteries of this cycle, but let's not forget that this recovery has been unusual in many ways. Employers have been reluctant to offer higher wages and salaries (which are hard to negotiate down when tough times hit), opting instead to shell out for a whole host of other benefits, such as one-time bonuses, paid leave and wellness programs. Currently, benefits make up a third of total compensation (up from a quarter a decade ago), whereas the share of wages and salaries has shrunk from 73% to a current 68% (Figure 8). One-time bonuses are up a staggering 13% compared to year-ago levels. And, as fewer workers with highly desirable skill sets remain unemployed, firms are digging down to a less skilled field and dabbling with more marginal workers. Their wage premium is lower than the highly skilled, which is another reason why, even as the labor market gets tight, wages are not spiraling out of control. Moreover, as the depth of the recession and slow recovery sidelined a vast amount of workers, many are in desperate need of training and skill-updating. As firms spend more on job-training programs, they are less willing to dole out higher wages, at least for the less skilled.

FIGURE 8
Employers Have Increased Benefits but Not Wages this Cycle
(wage and benefits, percent of total compensation)



Overheating also comes when parts of the economy display some type of irrational exuberance. And here, while pockets of imbalances exist, there are few signs that things have become overstretched. After nearly a decade of deleveraging, household and bank balance sheets are in terrific shape. Household debt service and financial obligations are at the lowest levels in more than four decades, homeownership rates have corrected back to their historical average, and spending on business fixed investments and consumer durables – a good barometer of an overheated economy – is still below its historical average.

Even our previous concerns, which we highlighted in last year's report, have been somewhat put to rest. After the data revisions, we learned that consumers have been stowing away money at a much faster rate than previously thought, a much welcomed development. Lending criteria has tightened for auto loans over the past five quarters, reversing recent trends showing auto loans waddling smack into subprime territory. At $1.4 trillion, student debt continues to remain at record highs, though the rate of growth has slowed down appreciably from a double-digit pace of a couple of years ago to a current 4.5%. Delinquencies also appear to have declined, though they are still high. Even stock market valuations, which appeared quite frothy at the start of the year, seem to be less divergent from fundamentals, partly because those fundamentals have improved materially and partly because, despite recent gains, early year wobbles repriced risk-taking to a more reasonable level.

There is, however, one pocket of the economy where risks are building, and while things are not yet out of hand, conditions have deteriorated materially. The non-financial corporate sector has gorged on debt during the course of this recovery amid low interest rates, easing standards and narrowing credit spreads. Corporate debt as percent of GDP is at an all-time high, at the same time when margins are coming under pressure (due to higher labor costs) and interest rates are rising. Leveraged loans, which are offered to businesses with an already high level of debt, have reached historical highs, at $1.4 trillion, and continue to expand at an eye-watering double-digit pace. In an all-too-familiar routine reminiscent of the pre-crisis era, roughly half of the newly originated leveraged loans are packaged into collateralized loan obligations (CLOs). Outstanding CLOs currently push $550

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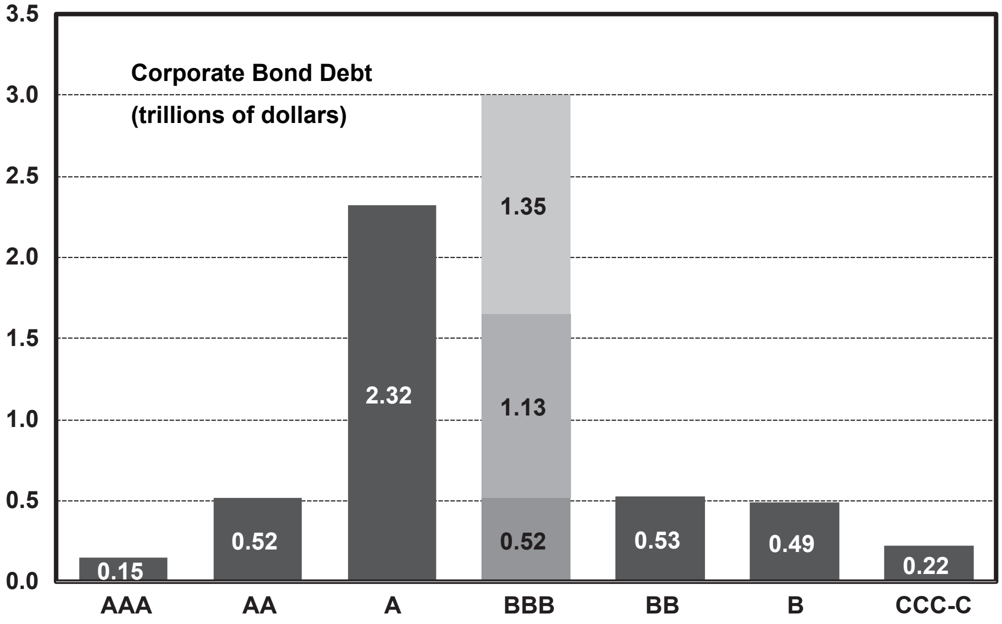
billion. Underwriting standards for these loans have been loosened substantially, reaching levels last seen in the heyday of the housing boom. Debt through bond financing does not fare better: the vast majority of corporate bonds (nearly $3 trillion) are BBB-rated, only a notch above junk (Figure 9).

FIGURE 9
The Quality of Corporate Bond Debt Has Deteriorated
(corporate bond debt, by category, trillions of dollars)



While the corporate bond market is stable for now, we will continue to monitor developments in this sector. Concerns about leverage and debt are normally papered over in good times, such as the ones we are experiencing now, but corporate credit is an asset class that bears watching in a mature business cycle. Cracks in the system commonly appear as financial conditions tighten, so it is prudent to be aware of these risks going forward.

The Next Recession: What Have We Learned 10 Years After the Crisis?

"Plus ça change, plus c'est la même chose"

It is said that every general fights the previous war. Even though policymakers have spent the 10 years since the crisis preparing for the next one, warding off risks in the mortgage and financial sector, chances are, the next recession will bear little resemblance to the last one. Nonetheless, ramparts are built up and battle lines are drawn with the last crisis in mind, in the hopes that we may have forever banished the specter of financial crises.

Even though policymakers have spent the last 10 years since the crisis preparing for the next one, warding off risks in the mortgage and financial sector, chances are, the next recession will bear little resemblance to the last one.

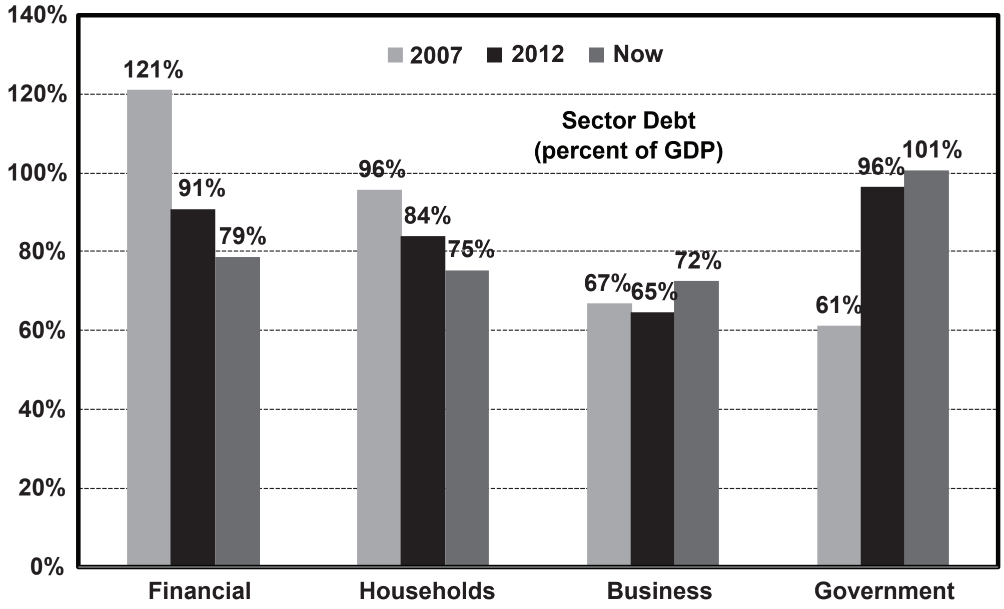
That thinking is exactly the wrong approach to this problem and the wrong way to judge progress. Financial meltdowns are an intrinsic part of modern economies: the IMF tally lists 124 crises worldwide since the 1970s. And, there is no doubt that crises are bred in complacency and during good times. As Richard Bookstaber, risk manager at Morgan Stanley, put it, "People aren't going to be that stupid again. They will find another way to be stupid. So there are going to be other crises." But before we worry about the next crisis, it is perhaps worth taking a look at how the last one did (or did not) reshape the global economy.

On its face, much has changed and the world that has emerged from the ashes of the Great Recession appears dramatically different from the one before. Regulators have managed to squeeze as much risk as possible out of the banking system, which is now better capitalized and substantially more scrutinized. Between 2011 and 2016, 30 of the world's largest "globally systemically important" banks boosted their common equity by around $1.3 trillion. Their money comes less from trading and more from short-term wholesale borrowing. Banks are subjected to endless "stress tests" and are forced to submit plans for their eventual demise should calamity hit. Banking profitability has suffered as a result: the return-on-equity (ROE) for U.S. banks, though sharply higher in the past two quarters, is still significantly below its pre-crisis average. Some of this is partly due to higher equity requirements, but some is certainly due to ultra-low interest rates which has compressed banks' margins and squeezed profits.

Regulators have managed to squeeze as much risk as possible out of the banking system, which is now better capitalized and substantially more scrutinized.

Households learned fast from the crisis: they deleveraged at lightning-speed, even though that process proved incredibly painful. Mortgage debt has come back to earth and mortgage loans are growing at a much more organic rate compared to the previous decade. Intent on not repeating previous mistakes, underwriters have substantially tightened lending standards for mortgages. The financial sector has also deleveraged dramatically: debt as percent of GDP has declined from a cycle high of 121% of GDP to a current, much more muted, 79% (Figure 10). Until very recently, business investments have been much more tepid compared to previous recovery cycles. This risk-off attitude permeated virtually every aspect of the economy for nearly nine years since the recovery began, which is the reason why the recovery has been so weak and why it has lasted so long.

FIGURE 10
Debt Has Reshuffled from Private to Public Sector (sector debt, percent of GDP)



Despite these changes, the world that has emerged is no less risky than the one before the crisis. Risk has simply morphed and migrated to other unregulated and under-regulated areas. While households and banks have deleveraged, public debt (and to a certain extent, corporate debt) has exploded (Figure 10). Debt has simply been reshuffled but not washed away. Risk has moved away from the banking system into "shadow banking," a catch-all term applied to the new power structure in the financial world, which is far less regulated than banks. They include powerful asset

Since "shadow banking" operates in the periphery of the regulatory reach, risks from these institutions are scantily tested and poorly understood.

management firms such as BlackRock, Vanguard and State Street, whose assets have doubled since 2009 to a current $16.5 trillion. Mortgages are being originated not so much by traditional banks, but by mortgage lenders such as Quicken Loans, PennyMac and Caliber. Quicken Loans originated $30 billion worth of mortgage loans in the first half of 2018, a third more than Bank of America and US Bank (with $21 billion each). In 2017, nonbanks generated a bit more than half of all mortgages in the U.S., up from a measly 9% in 2009. Since they operate in the periphery of the regulatory reach, risks from these institutions are scantily tested and poorly understood.

Other eerie similarities exist: the subprime mortgages appear to have been replaced by almost junk-rated corporate bonds, as the previous section argues. CLOs have replaced the now infamous collateralized debt obligations (CDOs). Even banks, which have been regulated within an inch of their existence, are not entirely safe: big banks simply got bigger since the crisis while small banks got more complex. U.S. taxpayers still underwrite the vast majority of mortgage debt. Property prices are back above pre-crisis levels and, in some cities, substantially above. Student loans have replaced mortgage debt, and while they are too small to bring the system to its knees, they are almost impossible to shake (even in bankruptcy), which means they will haunt an entire generation for a good chunk of their lives.

No, risk has not been wrung out of the system. And next time the crisis hits, governments across the world will be in a much weaker position, having squandered fistfuls of political goodwill in saving the banking sector (which had to be done) but being unable to affect broad-based inclusive growth in the ensuing recovery.

So, no, risk has not been wrung out of the system. And next time the crisis hits, governments across the world will be in a much weaker position, having squandered fistfuls of political goodwill in saving the banking sector (which had to be done) but being unable to affect broad-based inclusive growth in the ensuing recovery. The rise of the populist movement across the Western world, by and large, has its genesis in the deep trauma of the financial crisis and its aftermath. Let's hope this expansion lasts a lot longer than what most are predicting: a lot rides on just this simple fact.

Tit for Tat: The Specter of a Trade War

"How did you go bankrupt?"
"Gradually … and then suddenly"
Ernest Hemingway "The Sun Also Rises"

Undoubtedly, one of the darkest clouds casting a pall on an otherwise sunny outlook is the creeping threat of a full-blown trade war.

Undoubtedly, one of the darkest clouds casting a pall on an otherwise sunny outlook is the creeping threat of a full-blown trade war. Since the beginning of the year, trade tensions have ebbed and flowed (mostly flowed) at a dizzying pace. Chronicling the back-and-forth is a daunting task onto itself, but a worthy one if only to put things in a broader context.

Tariffs on solar panels (30%) and washing machines (20%) were announced by the Trump administration in January, followed by the March announcement of tariffs on steel (25%) and aluminum (10%). In turn, the European Union threatened retaliatory tariffs on a raft of the most iconic American goods, such as Levi's jeans, Kentucky bourbon and Harley Davidson motorcycles. The U.S. retaliated by threatening to impose a 25% tariff on European car exports (worth $60 billion). At the end of May, Canada imposed its own tariffs on a wide-range of U.S. exports (totaling $12.8 billion), while Mexico declared it would place duties on $3 billion of American goods, including steel.

While the first few rounds of tariffs were product-specific, the administration's announcement on March 22 of 25% tariffs on $50 billion of imports from China marked a clear departure from the earlier trend, targeting a specific country. The Chinese responded with duties between 15% and 25% on $3 billion of imports from the U.S., including food and agricultural products. The first tranche of U.S. tariffs on $34 billion of Chinese exports came into effect on July 6, with China slapping an equal-sized tariff on equal-sized American exports. The second tranche of tariffs on $16 billion of imports, by both countries, took effect on Aug. 23. Since then, the U.S. has levied an additional 10% tariffs on an eye-popping $200 billion of imports from China, which is slated to rise to 25% at the beginning of next year. China has retaliated with additional tariffs of 5% to 10% on $60 billion of American exports. Not to be outdone, the U.S. has threatened to slap a 25% rate on an additional $270 billion of imports from China, which combined with the original $250 billion already under higher duties would pretty much exhaust the entire universe of Chinese exports to the U.S. (worth $520 billion in 2017). Tables 1 and 2 summarize in detail the amount of tariffs imposed and threatened since trade tensions began to escalate.

TABLE 1
U.S. Trade Actions

DATE	PRODUCT	TARIFF RATE	VALUE OF GOODS (BILLIONS)	COUNTRY
Jan. 22	Washing machines	20% - 50%	$1.8	Multiple
Jan. 22	Solar panels	30%	$8.5	Multiple
March 23	Steel	25%	$23.4	Multiple
March 23	Aluminum	10%	$16.4	Multiple
July 6	Multiple products	25%	$34	China
Aug. 23	Multiple products	25%	$16	China
Sept. 24	Multiple products	10%	$200	China
Enacted Total			**$300.10**	
		PROPOSED		
Sept. 24	Multiple products	10% - 25%	$270	China
Enacted +Proposed			**$570**	

TABLE 2
Retaliatory Actions by Trading Partners

DATE	PRODUCT	TARIFF RATE	VALUE OF GOODS (BILLIONS)	COUNTRY
April 2	Multiple products	15%-25%	$3	China
June 5	Multiple products	7%-25%	$3.6	Mexico
June 21	Multiple products	5%-100%	$0.24	India
June 21	Multiple products	5%-40%	$1.8	Turkey
June 22	Multiple products	10%-50%	$3.2	EU
July 1	Multiple products	10%-125%	$12.7	Canada
July 6	Multiple products	25%	$34	China
July 6	Multiple products	25%-40%	$0.09	Russia
Aug. 23	Multiple products	25%	$16	China
Enacted Total			**$75**	
		PROPOSED		
Aug. 20	Multiple products	20%-25%	9.0	EU
Enacted +Proposed			**$84**	

Early on, the initial rolling out of the tariffs wreaked havoc on markets worldwide. … Since then, the reaction has been more muted, with the markets largely shrugging off the most recent escalations, even as it becomes painfully clear that trade jitters will remain part of the global tableau for quite some time.

The on-again, off-again trade skirmishes have had an evolving effect on financial markets. Early on, the initial rolling out of the tariffs wreaked havoc on markets worldwide. The Dow plunged 1,200 points in two subsequent days in early April after the announcement of the initial rounds of tariffs, wiping out as much as $1.4 trillion from global markets. Since then, the reaction has been more muted, with the markets largely shrugging off the most recent escalations, even as it becomes painfully clear that trade jitters will remain part of the global tableau for quite some time. A less panicked approach is also evident in America's large corporations: the Duke University survey of CFOs shows that a vast majority of companies have made no changes to their employment and capital expenditure plans as a result of escalating trade tensions.

Our own assessment of the trade disputes lies somewhere in between these two extremes. While we believe the U.S. is reasonably well positioned (in an economic sense) to weather the short-term detrimental impact of potential flare-ups in the trade conflict, the length and the scope of the conflict matter tremendously. Generally speaking, the longer these trade conflicts drag on and the more countries they engulf, the worse it is for sentiment, corporate profits, overall global risk environment and economic growth. In the words of Hemingway, "'How did you go bankrupt?' Two ways: gradually, then suddenly." Trade tension may escalate gradually, but the crisis usually hits suddenly.

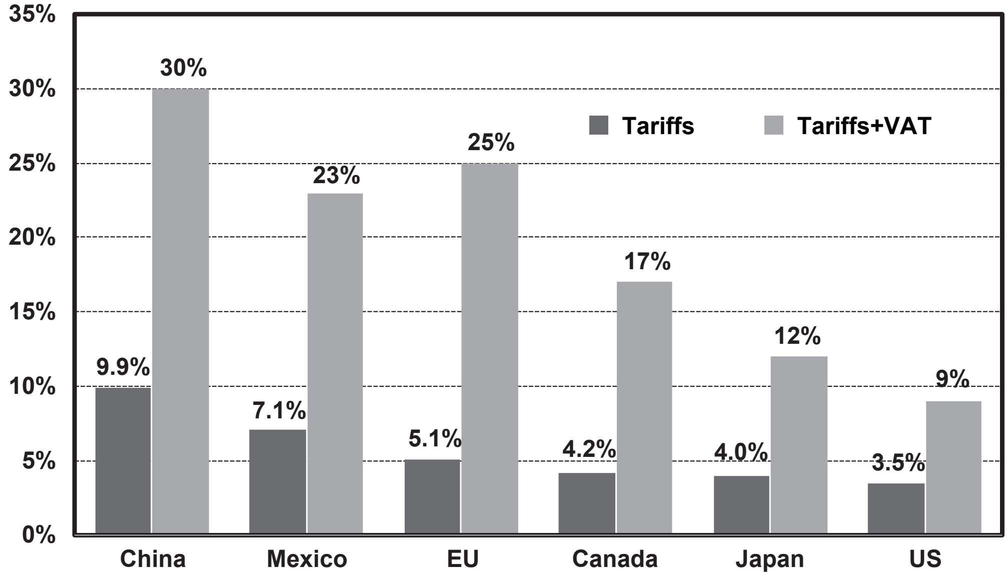
We want to stress upfront that an all-out trade war with significant global consequences is not our baseline scenario. There is no denying that the U.S. economy, thus far, has weathered the trade war remarkably well. However, things could deteriorate quickly.

We want to stress upfront that an all-out trade war with significant global consequences is not our baseline scenario. First and foremost, there is no denying that the U.S. economy, thus far, has weathered the trade war remarkably well. Some of this has to do with the fact that the tariffs that have gone into effect so far have been applied across a fairly small share of imports: the U.S. has levied tariffs on roughly $300 billion of imports, which accounts for around 13% of total imports and nearly 2% of consumer spending. Likewise, the retaliatory tariffs imposed by other countries encompass $75 billion of U.S. exports, or roughly 5% of total U.S. exports. Our calculations show that the impact to the U.S. economy of these tariffs will likely be muted. Inflation will rise by a scant 0.2%, in large part because tariffs are imposed on goods, and goods make up only a third of the CPI measure. And, the weakening of foreign currencies (most notably the yuan) against the dollar has taken some of the sting away from the inflationary pressure of tariffs. The impact on growth is also likely to be fairly limited, reducing real GDP growth by a meager 0.18% one year from now.

However, things could deteriorate quickly should the current 10% tariff on Chinese goods increase to 25% and encompass all U.S.-bound exports from the Middle Kingdom. Should this scenario materialize, our model predicts an increase in inflation in the range of 0.4% to 0.5%, forcing the Fed to tighten more aggressively. Real GDP growth will be reduced by a more meaningful 0.8%, and corporate earnings will take a hit, which will undoubtedly dent confidence. While not a catastrophe, this scenario is immeasurably more disruptive to the outlook than what we have experienced thus far.

Given its significant impact on growth, it is important to place the current trade war in context. The Trump administration has taken an unorthodox and unabashedly disruptive approach to trade, attempting to "right the wrongs of many decades." Some of its grievances are not without merit. America's tariff commitments under the WTO are lower than that of other countries: in 2015, the U.S. applied an average tariff rate of 3.5%, compared to 4.0% for Japan, 5.1% for the EU and 9.9% for China (Figure 11). When adding sales taxes (in the U.S.) and a significantly steeper value-added-tax (in Europe and China), the outcome is decidedly more lopsided against the U.S.: trade duties end up being as high as 24% in Germany, 25% in Great Britain and France, and 27% in China. Specific goods fare worse: U.S. car manufacturers face a 25% tariff rate in China, while tariff for car imports in the U.S. are only a tenth of that, at 2.5%. The WTO has allowed developing countries to impose far higher tariffs than industrialized ones, while they build up their industries at home. By joining the WTO, China has benefited immensely from lower tariffs that were negotiated over decades between the U.S. and other industrialized economies, while giving up little in return.

FIGURE 11
Tariffs vs. Tariffs+VATs
(average rate, percent)



Few would disagree that fairer but still free trade would benefit everyone, and even the staunchest supporters of free trade (such as ourselves) would agree that China's approach to trade has been consistently underhanded and less than fair. The Made in China 2025 plan – a blueprint for that country to develop its own global presence in fields from information technology to electric cars – relies heavily on coddling domestic firms, increasing trade barriers, and pressuring foreign companies to hand over technology and intellectual property in exchange for access to Chinese markets.

These distortions need to be addressed if the global trade system is to survive. Indeed, our initial gripe with the administration's approach to trade had less to do with the merit of its grievances (with which we agree) and more with its tactics. Escalating trade frictions on many fronts with many trading partners seems to be a strategic mistake. It would be more beneficial, for example, to first solve disputes with countries that tend to mostly play by the rules and display a unified front against those who don't. We have also been mystified by its single-minded approach to trade by focusing exclusively on the trade deficits for goods: in 2017 the U.S. had an overall $807 billion trade deficit in goods but a sizable $255 billion surplus in services. Given America's apparent comparative advantage in services, it would seem prudent that the administration, while fighting to open more markets for American goods, also pursue aggressive trade deals that promote exports of U.S. services.

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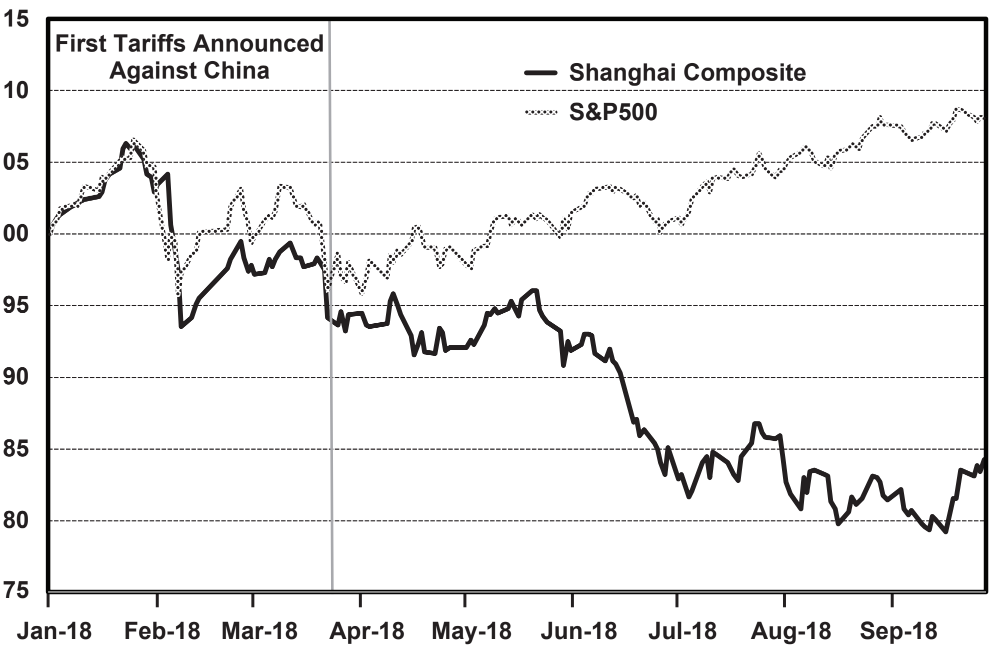
Moreover, as any beginner student of economics would tell you, tariffs are rather a blunt tool to deal with complex issues such as intellectual property and state-sponsored industrial exports. It is possible (as we believe) that the administration is wielding them as means to an end, attempting to get the parties to the negotiating table and wrangle more favorable terms. This seems to have worked in part: the U.S. and EU announced at the end of July a commitment to work toward "zero tariffs" and removal of non-trade barriers. In another historic achievement, the U.S., Mexico and Canada came to a final agreement in September on revising and modernizing the quarter-century old NAFTA deal. Nonetheless, it is China, and not the NAFTA trading partners nor the EU, who routinely engages in unfair trade practices.

In another historic achievement, the U.S., Mexico and Canada came to a final agreement in September on revising and modernizing the quarter-century old NAFTA deal.

Fortunately, many of our initial concerns regarding the administration's approach to trade have been significantly alleviated over the past few months. The de-escalation of trade confrontation with the EU is a welcome development, though further progress has been elusive since the initial agreement in July. But the biggest feat is the renegotiation of the NAFTA. Having come close to a complete collapse, the new deal bears a new name and an updated mandate. Christened the United States-Mexico-Canada Agreement, or USMCA, the new treaty has something in it for all parties involved. It includes U.S. demands on changing the rules of origin for vehicles, increasing the threshold produced in North America to 75% from 62.5%. The new treaty also requires that 40% to 45% of a vehicle be made by workers earning at least $16/hour – a measure aimed at discouraging firms from moving supply chains to lower-wage Mexico. It opens the Canadian dairy markets to U.S. farmers, and it updates and modernizes the old treaty based on new economic realities, including whole new chapters on digital trade, financial services and intellectual property. The administration was seeking a sunset clause of five years, but it had to compromise on a 16-year period instead (the three countries can meet every six years to decide if they want to renew the pact). Another point of contention – the one on investor-state dispute settlement (ISDS) – also ended in a compromise: the ISDS was sharply scaled back (a win for the Trump administration), but Chapter 19, an arbitration system dealing with trade disputes, survived (a win for Canadian officials).

Whatever additional details emerge from the deal, one thing is for certain: a deal is better than no deal. The successful completion of the negotiations has allowed global markets to take a collective breath of relief. With NAFTA 2.0 on the backburner and a de-escalation of trade conflict with the EU, the trade focus is now on China. And here, things seem poised to get significantly worse before they get better. So far, trade tensions between the two countries seem to have been less damaging to the U.S. than for China, whose growth model is still quite dependent on global supply chains. The verdict is the loudest in the financial markets: the yuan is down 8% against the dollar since April, and the Shanghai Composite Index has lost 9% of its value since then. In contrast, the S&P 500 has set new fresh highs, rising by nearly 10% over the same period (Figure 12). More broadly, China's growth is slowing at a time when America's economy is humming along at the fastest pace in over ten years. This may embolden the administration to pursue a more aggressive strategy with China.

FIGURE 12
Cracked China: US and Chinese Stock Markets Have Diverged
(index, January 2018=100)



This may end up pushing China too far, too fast, which would threaten not just a full-blown trade war but increased financial, economic and geopolitical risks. China still holds around $1 trillion of U.S. Treasury securities, and though it is unlikely to unload them in the international markets, the mere threat would be enough to spook investors around the world. Ultimately, China's least costly strategy over time may be to make some concessions to U.S. demands, resulting in a fairer, freer, and more durable lasting global order. Whether this will happen is anyone's guess. For now, hold on tight as the trade conflict with China is more likely to ramp up than wind down.

China's least costly strategy over time may be to make some concessions to U.S. demands, resulting in a fairer, freer and more durable lasting global order. Whether this will happen is anyone's guess.

Is Your Central Bank as Boring as Watching Paint Dry?

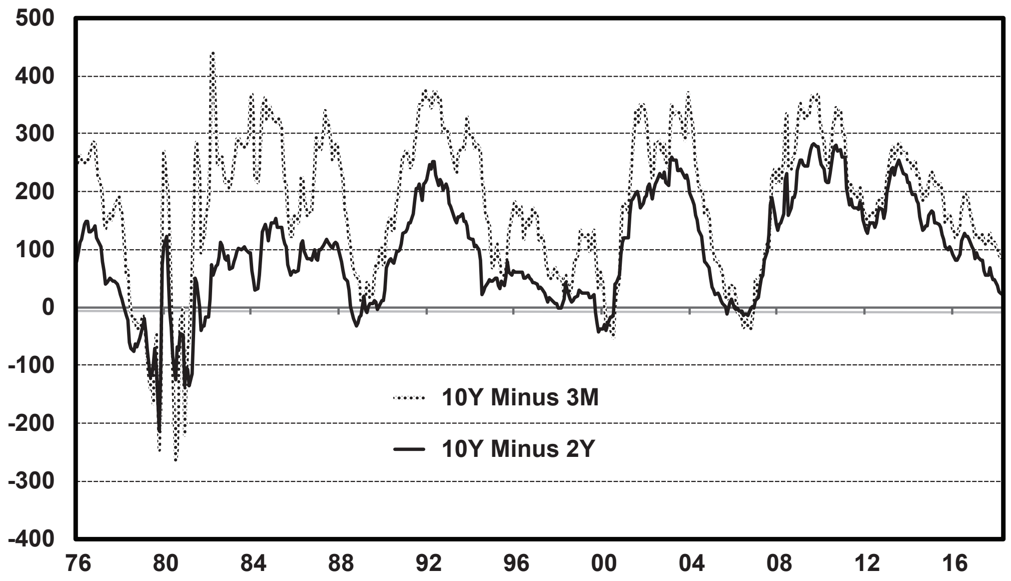
When the Fed first announced its plan to embark on interest rate hikes and unwind its bloated balance sheet, it had hoped the process would be as exciting as "watching paint dry," as Philadelphia Fed President Patrick Harker put it. It has been anything but.

It is not the Fed actions, which have been rather amply telegraphed in advance and well understood by the markets. It is rather their effect, which as we expected, has created dislocations across asset classes with differing impact across the world. As the tightening cycle continues, emerging markets have seen sizable capital outflows as higher rates lure investors onshore after years of looking for yield abroad. Though the retreat from emerging markets has been relatively orderly thus far, it has coincided (and partly driven) with a stronger dollar, contributing to currency crisis in a number of countries such as Turkey, South Africa Argentina, and Brazil. And while not all of these countries' woes can be laid at the Fed's doorstep (given each countries' idiosyncratic financial troubles), rate hiking certainly exposes vulnerabilities (such as excessive dollar-denominated debt), which were whitewashed when rates were low and excess liquidity carried everyone on a high tide.

Then, there are concerns about the yield curve. As the Fed tightens, the yield curve has flattened dramatically: the 10-year/2-year yield spread is hovering at around 25 basis points, signaling problems ahead (Figure 13). An inverted yield curve has preceded every previous recession, with a lead of roughly one year. However, we are not overly concerned about the yield curve at present, since the long-term yields have been suppressed for so long by the many rounds of quantitative

We are not overly concerned about the yield curve at present, given that long-term yields have been suppressed for so long by the many rounds of quantitative easing.

FIGURE 13
Danger Zone: The Yield Curve Is Flashing Warning Signs
(yield curve spread, basis points)



easing (QE) implemented at the height of the crisis and during the ensuing slow recovery. The Federal Reserve has stopped its QE and is even allowing its balance sheet to wind down, but what matters for interest rates is the Fed's bond holdings, which are still outsized. As the expansion continues apace long-term yields will rise reflecting stronger growth, the unwinding of Fed's balance sheets and the ramp-up in Treasury issuance needed to finance the U.S. fiscal stimulus.

We expect the Fed to hike interest rates one more time this year, in December, and have penciled in three more rate hikes next year.

We expect the Fed to hike interest rates one more time this year, in December, and have penciled in three more rate hikes next year. We expect the Fed to remain on hold in 2020. This is in line with the Fed's own dot-plot forecasts, but slightly more hawkish than the markets. Our own forecasts would take the top end of the target range to 3.25%, a level that is around 50 basis above what we consider to be the "neutral" rate.

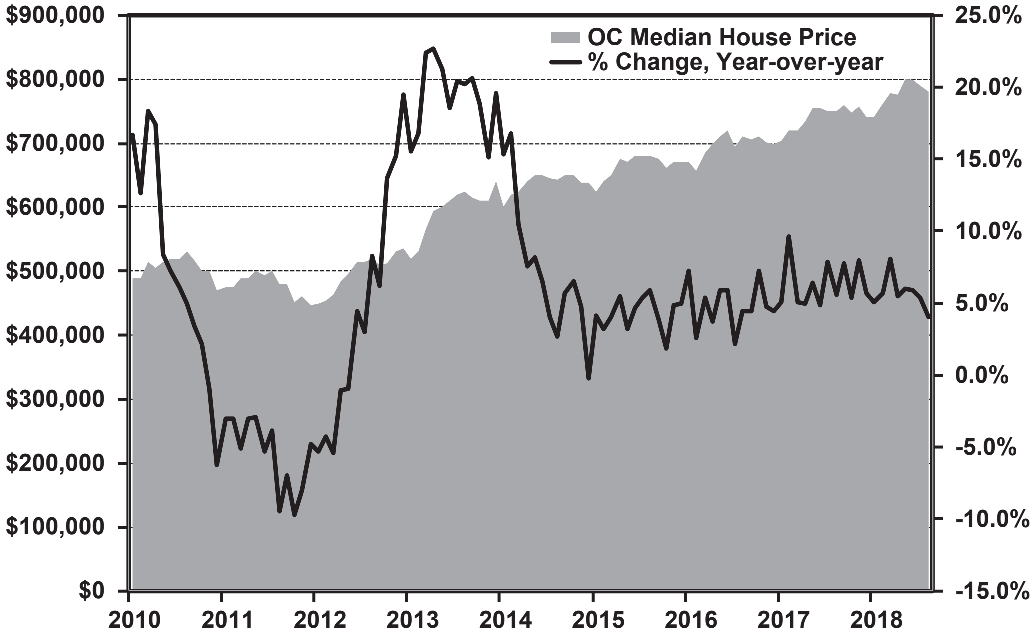
ORANGE COUNTY AND SOUTHERN CALIFORNIA

As discussed above, the national employment picture has been exceptionally robust. Job growth is expected to continue at a healthy pace in the coming six quarters, even though the pace of job formation is expected to slow a bit as the economy bumps against capacity constraints. Employment growth in Orange County and the state of California appears to have slowed down over the last several months, but it is not clear whether this is due to uncertain EDD data, as was the case last year, or if it is an actual phenomenon. Our in-house business expectations surveys show that local business leaders continue to be enthusiastic about local economic conditions and housing prices continue to rise.

Housing and Construction

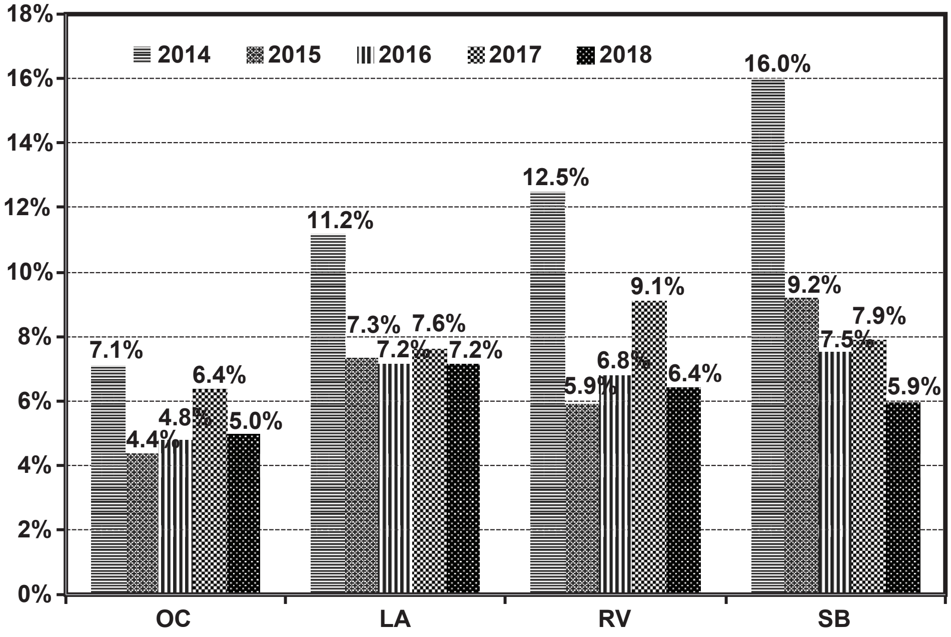
Housing prices have continued their upward trend so far this year, albeit, as expected, at a more moderate pace. Since the 2012-2014 period, when home prices rose at a breakneck double-digit pace, home price appreciation has settled between 5-10% over the past four years in all the counties of Southern California. In Orange County, median single-family house prices hit $800,000 in May 2018, an all-time high (Figure 14). Median prices in the county were rising at an annual rate of 5% in August 2018, following increases of 6.4% in 2017 and 4-5% during 2015 and 2016.

FIGURE 14
Orange County Median Home Prices
(level and percent change)



Similarly, median home prices in Los Angeles County reached a peak of $649,000 in June 2018. Median home prices in the county have experienced a 7.2% increase so far in 2018, following a 7% increase during the past three years (Figure 15). Riverside County median prices reached a high for this cycle of $390,000 in July 2018. Its median housing prices have risen by 6.4% in 2018, following increases of 9.1% in 2017, 6.8% in 2016 and 5.9% in 2015. San Bernardino County's median housing prices reached $318,000 in June 2018. Housing prices in that county have risen by 5.9% in 2018, following increases of 7.9% in 2017, 7.5% in 2016 and 9.2% in 2015. It is important to note that unlike Orange County and Los Angeles County, where home prices have surpassed their pre-crisis peaks, prices in the Riverside and San Bernardino areas have yet to fully recover, though undeniably, enormous progress has been made.

FIGURE 15
Home Prices: A Cross-County Perspective
(year-over-year, percent change; annualized growth YTD in 2018)



The recent cooling of the housing market is not just a Southern California phenomenon: Home price appreciation has downshifted nationally. This is hardly a surprise, given the dramatic increase in prices during the 2012-2014 period. But other factors are contributing to the slowdown as well. Land prices and construction materials prices have jumped significantly in the last three years. Local land use regulations usually do not allow higher density developments, thus making single-family homes unaffordable. Construction has slowed down as a result.

Housing price increases nationwide have slowed down. Land prices and construction materials prices have jumped. Local land use regulations usually do not allow higher density developments, thus making single family homes unaffordable.

Increasing homelessness is partly the result of shortage of affordable housing. While the economy has been growing at a rapid clip over the past few years (as measured by output and employment), wage growth has been tepid. That restrains what households can pay for housing. During the last few years, the process of gentrification has crept in virtually everywhere in coastal areas, leading to a significant movement of less well-off households out of traditional middle-class neighborhoods. In Southern California, this implies that more people are moving to the Inland Empire from the more expensive areas of Orange County, Los Angeles County and Ventura County.

While the economy has been growing at a rapid pace since 2011 (as measured by output and employment), wage growth has been tepid. That restrains what households can pay for housing.

As of the end of September, the 30-year mortgage rate hit 4.72%, almost one hundred basis points higher than the 3.83% rate recorded in September 2017. As the Fed continues with its steady rate-hiking cycle, we expect mortgage rates to rise further during the forecast horizon. Coupled with some signs of weakness in the local economy, higher interest rates and low affordability will likely restrain demand, so it would not be surprising to see a more tepid pace for home price appreciation over the next few years. We expect home prices to rise, on average, in the 4-5% range in 2018 and 2019 for Orange County and other counties in Southern California.

Construction activity has slowed in Orange County but is continuing at a healthier pace in other parts of Southern California. Permits for construction are expected to grow by 12-15% in 2018 for Southern California as a whole but then stabilize at a somewhat lower level for the next two years. Most of the growth will be coming from the Inland Empire and Los Angeles County. Given current trends, construction permits for Orange County are expected to decrease from more than 9,500 to 8,000 in 2018 and then grow at moderate rates thereafter.

The Labor Market: Overview and Forecasts

Orange County's unemployment rate has recently been at historic lows. It dropped to 2.6% in April and May 2018, levels not seen since the heyday of the tech boom in the mid-1990s. Similarly, the unemployment rate touched historical lows during the April-May period for the Inland Empire (at 3.7%) and Los Angeles County (at 4%). Broad-based, organic strength in the economy is certainly one reason for historically low unemployment rates.

Another possible explanation may be that a number of people who stepped out of the labor force during the Great Recession have yet to come back in to the market, if they ever will. Slower growth in the labor force may thus account for the tight labor markets. In addition, since county unemployment rates are not seasonally adjusted, they are subject to substantial variations in comparison with the national unemployment rate. It is possible that some of these numbers may be revised higher in the future, though even with subsequent revisions, it is hard to deny that unemployment rates in the region are extremely low and the labor market extremely tight.

We pointed out in our last year's report that monthly employment figures reported by EDD for Orange County during 2017 were suspect. As it turned out, during the benchmark revisions in February 2018, these data were substantially upwardly revised. Unfortunately, it appears that the EDD data may be giving similar false signals again for Orange County for this year.

Another important and interesting phenomenon that has emerged more recently (though it is not unprecedented) and is affecting the forecasts for the local economies is the large revision of the jobs data from the California Employment Development Department (EDD). We pointed out in last year's report that large and consistently lower monthly employment figures reported by the EDD for Orange County in 2017 were highly suspect. As it turned out, and in line with our expectations, during the benchmark revisions in February 2018, this data was revised substantially upward. We have analyzed this phenomenon for Orange, Los Angeles and Riverside-San Bernardino counties in Table 3.

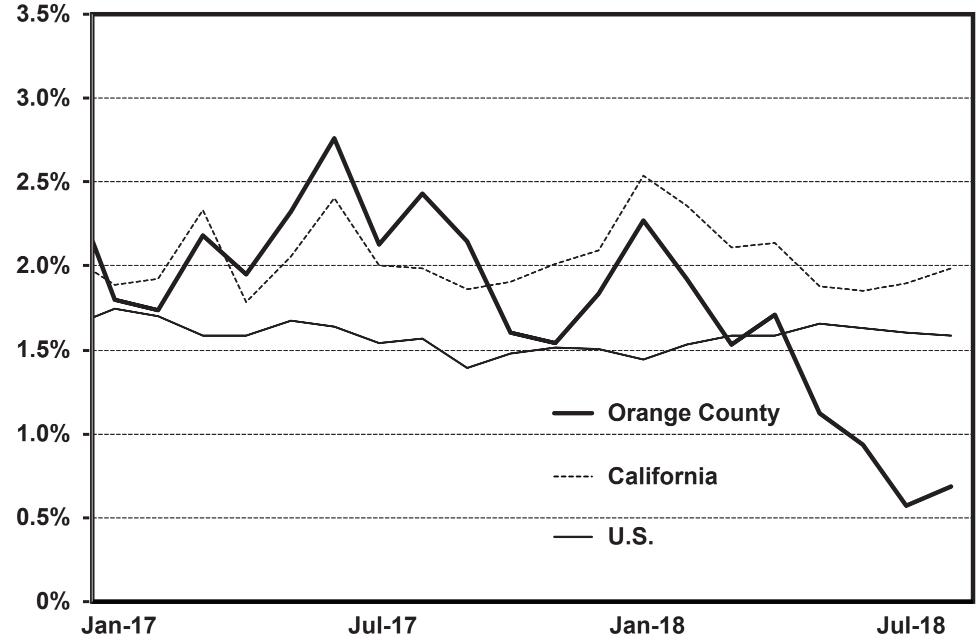
TABLE 3
Employment Development Department (EDD) Benchmark Revisions
Over- and Under-Estimates of Monthly Total Non-Farm Employment

	AS OF AUGUST RELEASE	AFTER BENCHMARK REVISION	NUMERICAL DIFFERENCE	% DIFFERENCE
ORANGE COUNTY				
2014	1,473,050	1,483,588	10,538	0.72%
2015	1,533,825	1,530,140	(3,685)	-0.24%
2016	1,574,175	1,571,560	(2,615)	-0.17%
2017	1,582,638	1,605,563	22,925	1.45%
LOS ANGELES COUNTY				
2014	4,170,375	4,195,350	24,975	0.60%
2015	4,295,288	4,243,025	(52,263)	-1.22%
2016	4,341,038	4,363,338	22,300	0.51%
2017	4,244,663	4,408,363	163,700	3.86%
RIVERSIDE-SAN BERNARDINO COUNTY				
2014	1,249,525	1,272,275	22,750	1.82%
2015	1,323,425	1,334,263	10,838	0.82%
2016	1,375,450	1,387,263	11,813	0.86%
2017	1,431,138	1,436,925	5,787	0.40%

This is not simple fidgeting with edges but dramatic changes. The EDD missed 163,700 jobs (or 3.86%) for Los Angeles County and a full 22,925 jobs (1.45%) for Orange County in 2017. This may have led many to believe that the two counties' economies were doing a lot worse than they actually were. This also leads astray forecasts for these counties, since most forecasts rely heavily on the most recent data.

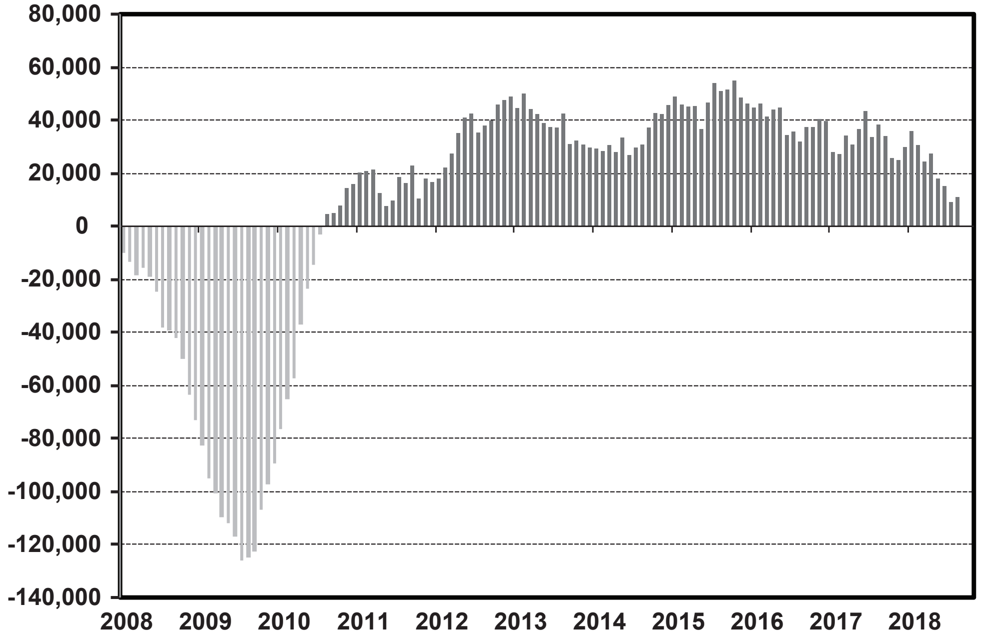
Unfortunately, it appears that the EDD data may be giving similar false signals again for Orange County for this year. As seen in Figure 16, based on the monthly data releases by the EDD, the county payroll employment is showing a significant downward trend on a year-over-year basis for 2018. This is not the case for Los Angeles County or Inland Empire. We have, therefore, made appropriate adjustments to the payroll numbers for Orange County for possible major revisions to its 2018 data that will be undertaken in February and March 2019.

FIGURE 16
EDD Payroll Employment Data: Orange County vs. California
(y-o-y percent change)



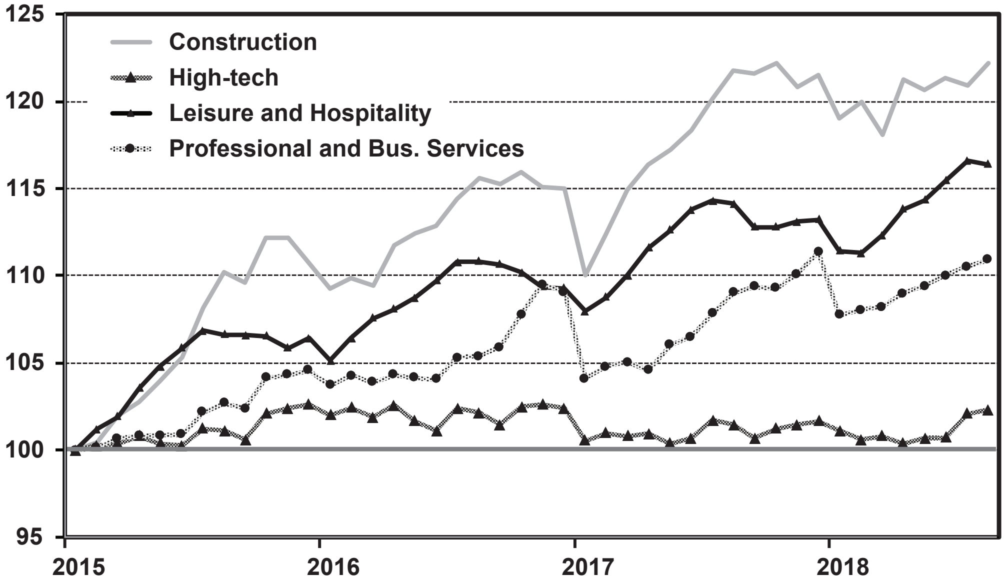
Analyzing the newly benchmarked data for 2017 and prior years, it appears that Orange County added a hefty 33,000 payroll jobs for a 2% increase in 2017, Los Angeles County added 51,000 jobs for a 1.1% increase, and the Inland Empire added 50,000 jobs for a 3.5% increase (Figure 17). For Orange County, the major contributors were educational and health services (10,000),

FIGURE 17
Orange County Payroll Employment
(year-over-year changes)



construction (5,000), leisure and hospitality (5,000) and professional business services (5,000) (Figure 18). For Los Angeles County, educational and health services was the outlier, with a gain of 26,000 jobs, followed by leisure and hospitality (14,000), and professional and business services (10,000). The Inland Empire saw an increase of 13,000 jobs in transportation and warehousing, followed by educational and health services (11,000) and government (8,000). Detailed tables for each county and the Southern California region as a whole are provided at the end of the report.

FIGURE 18
OC Major Sector Employment Trends
(Index level, Jan 2008=100)



On a periodic basis, we also look at additional features of the Orange County economy. Given the slow growth of incomes and the possible impact on home prices, construction activity and income disparity, we take a closer look at the growth in salaries by occupation over the past five years (Table 4). Since 2013, of the six industries with the highest average wage growth, five were those with the lowest average earnings: farming, food preparation, cleaning and maintenance, health care support, and production occupations. The only exception was the legal occupation, which had the highest increase of any sector at 5.4% and also had the highest average salary level.

TABLE 4
Orange County Annual Salary Growth Data
Average Annual % Growth 2013-2018

OCCUPATION	SALARY GROWTH (%)	2018 SALARY
Total for all occupations	**2.08**	**$57,892**
Occupations with above average increases		
Legal	5.39	$ 140,023
Farming, fishing and forestry	5.13	$ 30,281
Food preparation and serving-related	4.23	$ 28,482
Cleaning and maintenance	3.95	$ 31,753
Health care support	2.55	$ 37,472
Production	2.31	$ 37,278
Health care practitioners and technical	2.13	$ 92,042
Business and financial operations	2.10	$ 82,680

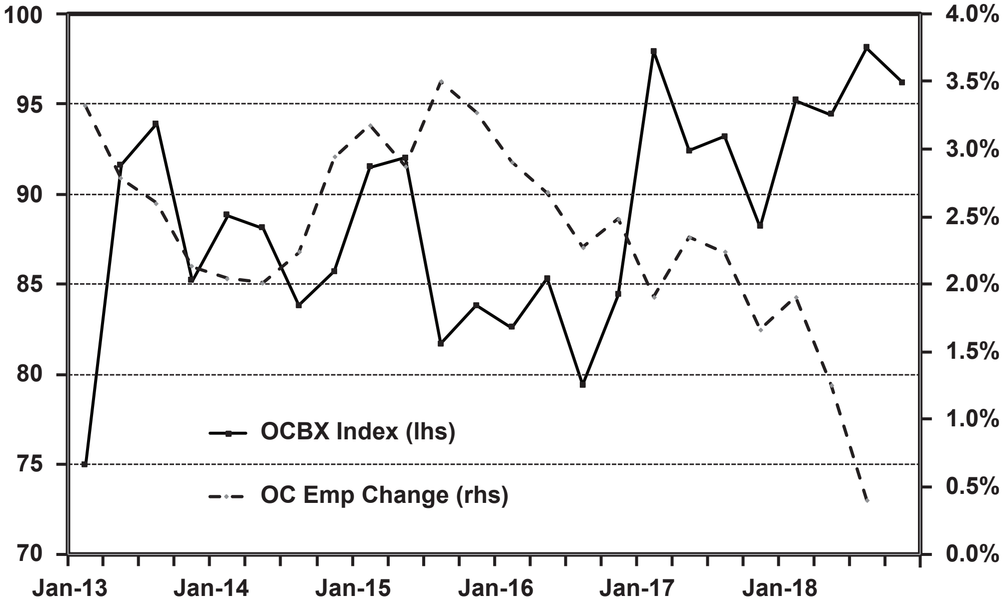
OCCUPATION	SALARY GROWTH (%)	2018 SALARY
Occupations with below average increases		
Transportation and material moving	2.07	$ 34,966
Computer and mathematical	1.96	$ 96,632
Management	1.80	$ 138,170
Office and administrative support	1.77	$ 42,551
Construction and extraction	1.76	$ 57,814
Sales and related	1.75	$ 48,367
Community and social services	1.69	$ 55,272
Installation, maintenance and repair	1.41	$ 52,584
Education, training and library	1.41	$ 65,284
Architecture and engineering	1.34	$ 93,992
Protective service	1.20	$ 54,681
Arts, design, entertainment, sports and media	0.73	$ 56,653
Life, physical and social sciences	0.04	$ 75,541

Business Expectations

The Orange County Business Expectations survey (OCBX), conducted by the Cal State Fullerton Woods Center for Economic Analysis and Forecasting, produces an index of local business sentiment. The index value for the fourth quarter of 2018 (96.2) is significantly higher compared to the fourth quarter of 2017 (88.2) but lower than the third quarter of 2018 (98.1) (Figure 19). The overall value of the OCBX index is a weighted average of several survey questions and provides a measure of overall business expectations for Orange County.

The index value for the fourth quarter of 2018 (96.2) is significantly higher compared to the fourth quarter of 2017 (88.2) but lower than the third quarter of 2018 (98.1). … The index has proven accurate in the past in predicting future job changes in Orange County.

FIGURE 19
Orange County OCBX Index and Employment Change
(Index level and employment y-o-y percent change)

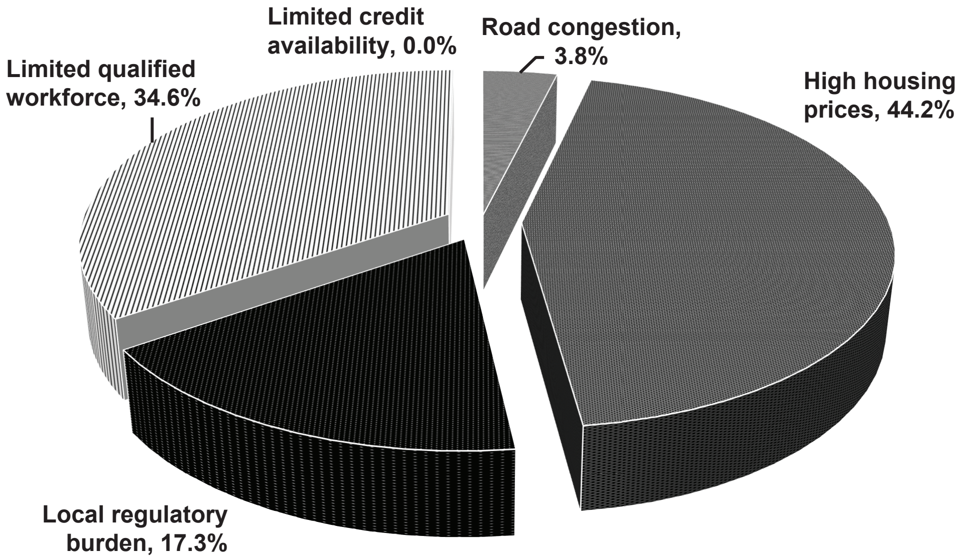


In the OC Business Survey, high housing costs, scarcity of appropriately trained workforce and local regulatory burden are stated as the leading causes. Traffic congestion is not mentioned as one of the top roadblocks to growth.

The index has proven accurate in the past in predicting future job changes in Orange County: a reading above 50 signifies continued improvement in the economy and in the labor market. As is evident, a gap between job growth and business sentiment has emerged in recent times. As discussed above, the EDD payroll employment data appear to underestimate the current strength of the Orange County labor market. As a result, the OCBX index and the lagged employment series are diverging more than usual. The business leaders of Orange County are still optimistic for the last quarter of the year about the growth of the local economy even though their enthusiasm has moderated slightly compared to the previous quarter.

In a special question this quarter, we asked business leaders to point out the major hindrances to growth in the county. As Figure 20 shows, high housing costs, scarcity of appropriately trained workforce and local regulatory burden are stated as the leading causes. Traffic congestion is not mentioned as one of the top roadblocks to growth.

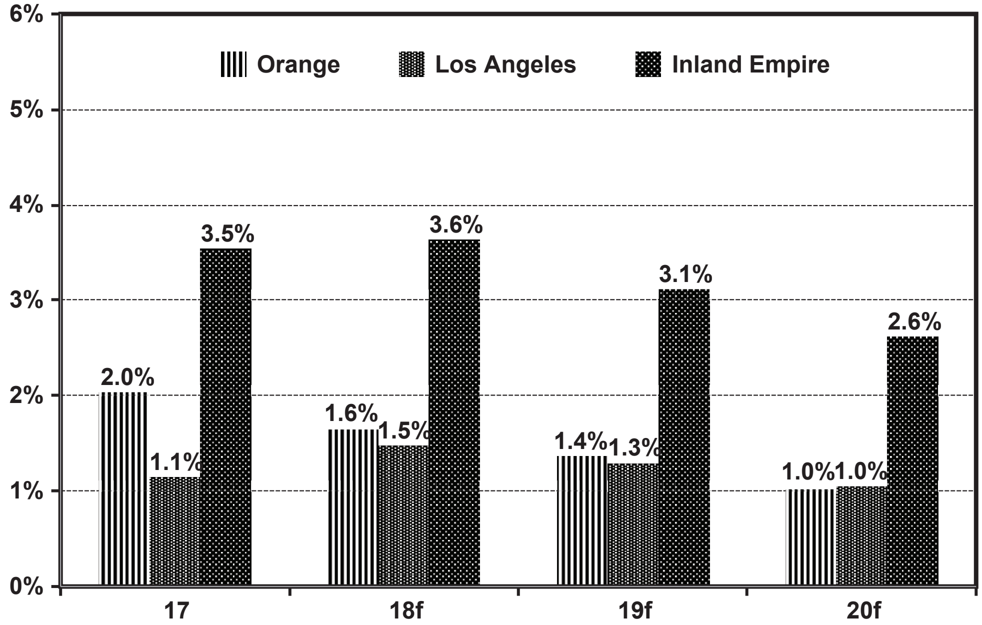
FIGURE 20
OCBX Survey of OC Business Executives
Hindrances to OC Growth



Forecasts

Despite the monthly EDD data showing year-over-year declines, we believe that Orange County's employment growth will continue at a moderately healthy pace. On top of 32,000 new jobs for a 2% job increase in 2017, we expect the county economy to add 26,000 jobs for a 1.6% increase in 2018, 22,000 (a 1.4% increase) in 2019 and 17,000 jobs for a 1% gain in 2020. We expect unemployment in Orange County to hover near 3-3.5% for the next two years.

FIGURE 21
Payroll Employment Forecasts
(annual percent rates)



The unemployment rate in Los Angeles County is predicted to decline and remain between 4-4.8% for the next two years, while the rate in the Inland Empire is expected be in the range of 3.8-4.2%. Payroll gains for Los Angeles County of 60,500 (1.5% growth) are expected in 2018, 58,000 (1.3% increase) in 2019 and 48,000 for a 1% gain in 2020. For the Inland Empire region, payroll employment gains of 53,000 are expected for 2018 (a 3.6% increase), 47,000 for a 3.1% increase in 2019 and 41,000 for a 2.6% increase in 2020.

Detailed economic data for all of the counties are given in the following tables.

Expert research assistance from Aaron Popp, Ph.D., Robert Guliano, Jason Arano, Micah Herman and Xue Tian is gratefully acknowledged.

TABLE 1 - NATIONAL

	2013	2014	2015	2016	2017	2018f	2019f	2020f	3 year average 2018-2020
GDP									
Real GDP (Bil. $)	15,355	15,612	16,013	16,472	16,716	17,234	17,734	18,160	17,709
% change RGDP	1.8	2.5	2.9	1.6	2.2	3.1	2.9	2.4	2.8
Nominal GDP (Bil. $)	16,785	17,522	18,219	18,707	19,485	20,460	21,524	22,514	20,098
% change Nominal GDP	3.6	4.4	4.0	2.7	4.2	5.0	5.2	4.6	4.9
RGDP Components									
Personal Consumption (% change)	1.5	2.9	3.7	2.7	2.5	2.6	2.9	2.4	2.6
Nonresidential Fixed Investments (% change)	4.1	6.9	1.8	0.5	5.3	7.3	5.2	3.8	5.4
Residential Investments (% change)	12.4	3.9	10.1	6.5	3.3	1.1	3.3	3.6	2.7
Exports (% change)	3.6	4.3	0.6	-0.1	3	4.5	4.8	5.1	4.8
Imports (% change)	1.5	5.1	5.5	1.9	4.6	4.7	5.9	5.3	5.3
Net Exports (Bil. $)	-533	-578	-725	-786	-859	-878	-943	-924	-915
Federal Deficit (Bil. $)	-680	-483	-439	-587	-666	-785	-1,010	-1,120	-972
Labor Sector									
Unemployment Rate (%)	7.4	6.2	5.3	4.9	4.4	3.9	3.6	3.5	3.7
Payroll Employment (% change)	1.6	1.9	2.1	1.8	1.6	1.6	1.3	1.0	1.3
Average Weekly Hours (saar)	34.4	34.5	34.5	34.4	34.4	34.5	34.5	34.6	34.5
Labor Productivity (%, saar)	0.3	1.0	1.2	0.0	1.3	1.6	2.0	2.3	2.0
Prices and Wages									
CPI (% change)	1.5	1.6	0.1	1.3	2.1	2.5	2.7	2.6	2.6
Core CPI (% change)	1.8	1.7	1.8	2.2	1.8	2.2	2.6	2.3	2.4
PCE Deflator (% change)	1.3	1.5	0.3	1.2	1.8	1.7	1.8	1.9	1.8
GDP Deflator (% change)	1.8	1.6	1.8	1.1	1.3	2.1	2.5	2.3	2.3
Employment Cost Index (% change)	1.9	2.1	2.1	2.1	2.5	2.9	3.1	3.3	3.1
Income/Profits									
Personal Income (% change)	1.2	5.7	4.9	2.6	4.4	4.6	4.8	4.7	4.7
Real Disposable Income (% change)	-1.3	4.0	4.1	1.7	2.6	2.9	3.2	2.7	2.9
Savings Rate (% of disp. income)	6.4	7.4	7.6	6.7	6.7	6.7	6.4	6.2	6.4
After-Tax Profits (% change)	-1.8	3.7	-6.4	0.0	5.4	15.2	4.3	0.8	6.8
Financial Markets (year-end)									
Federal Funds Rate (Upper range) (%)	0.25	0.50	0.75	1.50	2.25	2.50	3.25	3.25	3.00
3-Month T-bill rate (%)	0.07	0.03	0.23	0.51	1.32	1.95	2.93	3.00	2.63
10-Year Treasury Note (%)	2.90	2.21	2.24	2.49	2.40	3.20	3.90	4.15	3.75
30-Year Fixed Mortgage Rate (%)	4.48	3.87	4.01	4.32	3.99	4.65	5.30	5.50	5.15
Exchange Rate, Major Trading Partners (% change)	4.1	10.4	11.7	1.6	-7.0	1.9	2.0	0.8	1.57
Other Key Measures									
Crude Oil - Brent ($ per Barrel)	108.6	99.0	52.4	43.5	54.2	73.2	83.4	78.4	78.3
Industrial Production (% change)	2.0	3.1	-0.7	-1.2	1.6	3.8	3.6	2.8	3.4
Housing Starts (Mill. Units, saar)	0.93	1.00	1.11	1.17	1.21	1.29	1.35	1.42	1.4
Existing Home Sales (Mill. Units, saar)	5.07	4.92	5.23	5.40	5.54	5.37	5.45	5.61	5.5
Light Vehicle Sales (Mill. Units, saar)	15.5	16.5	17.4	17.5	17.1	17.0	16.7	16.5	16.7

TABLE 2 - ORANGE COUNTY

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	3,172.5	3,200.0	3,227.6	3,255.2	3,282.7
Annual percentage change	0.5%	0.9%	0.9%	0.9%	0.8%
Household Employment					
Labor Force	1,602.5	1,618.8	1,611.7	1,618.4	1,628.8
Total Employment	1,537.7	1,562.2	1,567.2	1,582.5	1,592.6
Total Unemployment	64.8	56.6	47.3	46.0	48.5
Unemployment Rate	4.0%	3.5%	2.9%	2.8%	3.0%
Wage & Salary Employment					
Total Nonfarm	1,584.3	1,616.6	1,643.1	1,665.5	1,682.6
Goods Producing	255.0	261.0	264.7	270.4	274.2
Mining and Logging	0.6	0.7	0.7	0.7	0.7
Construction	97.4	101.7	107.1	111.1	113.5
Manufacturing	157.0	158.6	156.9	158.5	160.0
Durable Goods	115.0	115.4	114.2	115.6	116.9
Nondurable Goods	42.0	43.2	42.7	42.9	43.1
Service Providing	1,329.4	1,355.6	1,378.4	1,395.1	1,408.4
Trade, Transportation and Utilities	260.5	263.0	262.6	264.2	265.6
Wholesale Trade	80.9	82.0	82.9	84.0	85.0
Retail Trade	152.4	153.4	151.8	152.1	152.5
Transportation, Warehousing and Utilities	27.2	27.6	28.0	28.0	28.2
Information	26.4	27.3	27.2	27.1	27.0
Financial Activities	117.6	119.0	118.3	118.5	118.6
Professional and Business Services	296.9	301.7	311.0	320.9	328.7
Educational and Health Services	206.0	215.7	224.8	227.6	229.9
Leisure and Hospitality	212.0	218.2	223.0	225.0	226.7
Other Services	50.4	50.2	50.2	50.8	51.3
Government	159.6	160.5	161.4	161.1	160.6
Percentage change					
Total Nonfarm	2.6%	2.0%	1.6%	1.4%	1.0%
Goods Producing	2.3%	2.4%	1.4%	2.2%	1.4%
Mining and Logging	-10.7%	20.9%	3.5%	-0.2%	-0.2%
Construction	6.2%	4.4%	5.3%	3.8%	2.2%
Manufacturing	0.0%	1.0%	-1.1%	1.1%	0.9%
Durable Goods	-0.2%	0.4%	-1.1%	1.3%	1.1%
Nondurable Goods	0.7%	2.8%	-1.2%	0.5%	0.4%
Service Providing	2.6%	2.0%	1.7%	1.2%	1.0%
Trade, Transportation and Utilities	0.5%	1.0%	-0.2%	0.6%	0.5%
Wholesale Trade	0.1%	1.4%	1.0%	1.4%	1.1%
Retail Trade	0.6%	0.7%	-1.0%	0.2%	0.2%
Transportation, Warehousing and Utilities	1.1%	1.3%	1.4%	0.2%	0.4%
Information	3.4%	3.4%	-0.3%	-0.3%	-0.2%
Financial Activities	1.3%	1.1%	-0.5%	0.2%	0.1%
Professional and Business Services	3.6%	1.6%	3.1%	3.2%	2.4%
Educational and Health Services	3.7%	4.7%	4.2%	1.2%	1.0%
Leisure and Hospitality	4.0%	2.9%	2.2%	0.9%	0.8%
Other Services	3.1%	-0.3%	-0.2%	1.3%	1.0%
Government	2.0%	0.6%	0.6%	-0.2%	-0.3%
Levels in millions					
Personal Income					
Personal Income	196.9	205.5	214.6	224.5	234.9
Annual percentage change	4.5%	4.3%	4.4%	4.6%	4.6%
Per capita income ($)	$62,071	$64,213	$66,479	$68,979	$71,556
Levels in billions					
Taxable Sales					
Total taxable sales	62.5	65.2	68.5	71.8	74.5
Year to year percentage change	1.9%	4.3%	5.0%	4.8%	3.8%

TABLE 3 - SOUTHERN CALIFORNIA

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	18,967.0	19,176.8	19,388.2	19,600.6	19,813.1
Annual percentage change	0.8%	1.1%	1.1%	1.1%	1.1%
Household Employment					
Labor Force	9,146.0	9,267.5	9,271.4	9,309.4	9,376.7
Total Employment	8,656.9	8834.5	8922.0	9052.6	9160.3
Total Unemployment	489.0	433.0	392.4	394.7	404.1
Unemployment Rate	5.3%	4.7%	4.2%	4.2%	4.3%
Wage & Salary Employment					
Total Nonfarm	7,724.3	7,861.0	8,010.9	8,141.8	8,250.2
Goods Producing	992.4	997.9	1,020.7	1,037.8	1,051.3
Mining and Logging	6.7	6.5	6.7	6.8	7.0
Construction	337.8	352.1	374.0	387.1	402.5
Manufacturing	647.9	639.3	639.9	643.9	641.8
Durable Goods	401.8	400.3	404.8	411.2	411.2
Nondurable Goods	246.1	239.0	235.1	232.7	230.6
Service Providing	6,731.9	6,863.1	6,990.2	7,104.0	7,198.9
Trade, Transportation and Utilities	1,508.9	1,539.8	1,553.4	1,578.2	1,600.5
Wholesale Trade	383.8	385.5	388.6	391.3	395.4
Retail Trade	799.9	805.9	809.1	820.8	829.4
Transportation, Warehousing and Utilities	325.3	348.3	355.8	366.2	375.8
Information	272.3	258.3	255.8	254.8	254.5
Financial Activities	400.7	402.8	404.4	407.8	406.5
Professional and Business Services	1,083.4	1,101.4	1,129.7	1,141.1	1,154.6
Educational and Health Services	1,241.5	1,289.7	1,327.3	1,367.7	1,396.4
Leisure and Hospitality	922.9	949.4	988.8	1,018.1	1,044.9
Other Services	258.7	260.4	259.6	262.8	265.0
Government	1,043.4	1,061.3	1,071.1	1,073.6	1,076.5
Percentage change					
Total Nonfarm	2.7%	1.8%	1.9%	1.6%	1.3%
Goods Producing	1.4%	0.6%	2.3%	1.7%	1.3%
Mining and Logging	-19.7%	-2.9%	3.0%	0.8%	3.0%
Construction	6.4%	4.2%	6.2%	3.5%	4.0%
Manufacturing	-0.7%	-1.3%	0.1%	0.6%	-0.3%
Durable Goods	-1.0%	-0.4%	1.1%	1.6%	0.0%
Nondurable Goods	-0.3%	-2.9%	-1.6%	-1.0%	-0.9%
Service Providing	2.9%	1.9%	1.9%	1.6%	1.3%
Trade, Transportation and Utilities	2.0%	2.0%	0.9%	1.6%	1.4%
Wholesale Trade	0.4%	0.5%	0.8%	0.7%	1.1%
Retail Trade	0.8%	0.8%	0.4%	1.4%	1.0%
Transportation, Warehousing and Utilities	7.0%	7.1%	2.1%	2.9%	2.6%
Information	9.0%	-5.1%	-1.0%	-0.4%	-0.1%
Financial Activities	1.5%	0.5%	0.4%	0.8%	-0.3%
Professional and Business Services	1.6%	1.7%	2.6%	1.0%	1.2%
Educational and Health Services	3.7%	3.9%	2.9%	3.0%	2.1%
Leisure and Hospitality	4.6%	2.9%	4.1%	3.0%	2.6%
Other Services	1.7%	0.7%	-0.3%	1.2%	0.8%
Government	2.1%	1.7%	0.9%	0.2%	0.3%
Levels in millions					
Personal Income					
Personal Income	981.1	1025.3	1072.3	1123.8	1177.4
Annual percentage change	3.3%	4.5%	4.6%	4.8%	4.8%
Per capita income ($)	$51,724	$53,466	$55,304	$57,336	$59,424
Levels in billions					
Taxable Sales					
Total taxable sales	304.1	314.1	324.8	335.4	345.2
Year to year percentage change	2.4%	3.3%	3.4%	3.3%	2.9%

TABLE 4 - LOS ANGELES COUNTY

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	10,137.9	10,188.6	10,259.9	10,331.7	10,404.1
Annual percentage change	0.3%	0.5%	0.7%	0.7%	0.7%
Household Employment					
Labor Force	5,054.9	5,123.9	5,121.1	5,113.4	5,125.9
Total Employment	4,789.5	4,883.6	4,938.1	5,010.7	5,056.2
Total Unemployment	265.4	240.3	231.4	242.2	244.2
Unemployment Rate	5.3%	4.7%	4.5%	4.7%	4.8%
Wage & Salary Employment					
Total Nonfarm	4,385.5	4,435.7	4,501.3	4,559.2	4,606.8
Goods Producing	496.7	490.1	499.4	501.5	500.9
Mining and Logging	2.5	2.2	2.2	2.4	2.6
Construction	133.9	137.7	145.9	149.2	151.5
Manufacturing	360.3	350.1	351.3	349.8	346.8
Durable Goods	203.2	202.0	206.0	207.3	206.9
Nondurable Goods	157.1	148.1	145.3	142.5	139.9
Service Providing	3,888.8	3,945.6	4,001.8	4,057.7	4,105.9
Trade, Transportation and Utilities	829.0	838.9	837.4	846.5	851.0
Wholesale Trade	225.2	224.5	223.6	226.1	227.0
Retail Trade	421.5	422.5	421.8	428.1	431.7
Transportation, Warehousing and Utilities	182.3	191.8	191.9	192.3	192.3
Information	229.2	214.5	212.4	211.5	211.4
Financial Activities	219.8	221.1	222.8	225.4	226.9
Professional and Business Services	603.2	613.4	625.5	625.6	629.0
Educational and Health Services	767.6	794.3	814.4	839.9	859.3
Leisure and Hospitality	510.0	523.9	552.3	570.9	586.4
Other Services	153.3	154.1	152.3	153.9	154.8
Government	576.7	585.5	584.8	584.0	587.2
Percentage change					
Total Nonfarm	2.5%	1.1%	1.5%	1.3%	1.0%
Goods Producing	0.0%	-1.3%	1.9%	0.4%	-0.1%
Mining and Logging	-12.7%	-11.2%	0.2%	7.9%	8.2%
Construction	6.1%	2.8%	6.0%	2.3%	1.5%
Manufacturing	-2.0%	-2.8%	0.3%	-0.4%	-0.9%
Durable Goods	-2.3%	-0.6%	2.0%	0.6%	-0.2%
Nondurable Goods	-1.7%	-5.7%	-1.9%	-1.9%	-1.9%
Service Providing	2.9%	1.5%	1.4%	1.4%	1.2%
Trade, Transportation and Utilities	1.5%	1.2%	-0.2%	1.1%	0.5%
Wholesale Trade	-0.2%	-0.3%	-0.4%	1.1%	0.4%
Retail Trade	0.5%	0.2%	-0.2%	1.5%	0.8%
Transportation, Warehousing and Utilities	6.3%	5.2%	0.0%	0.2%	0.0%
Information	10.5%	-6.4%	-1.0%	-0.4%	0.0%
Financial Activities	2.0%	0.6%	0.7%	1.2%	0.7%
Professional and Business Services	1.6%	1.7%	2.0%	0.0%	0.5%
Educational and Health Services	3.6%	3.5%	2.5%	3.1%	2.3%
Leisure and Hospitality	4.8%	2.7%	5.4%	3.4%	2.7%
Other Services	1.5%	0.5%	-1.1%	1.0%	0.6%
Government	1.4%	1.5%	-0.1%	-0.1%	0.6%
Levels in millions					
Personal Income					
Personal Income	563.9	590.0	617.7	648.3	680.1
Annual percentage change	2.7%	4.6%	4.7%	4.9%	4.9%
Per capita income ($)	$55,624	$57,905	$60,205	$62,745	$65,366
Levels in billions					
Taxable Sales					
Total taxable sales	154.2	158.0	161.6	165.0	168.5
Year to year percentage change	2.1%	2.5%	2.3%	2.1%	2.1%

TABLE 5 - RIVERSIDE /SAN BERNARDINO

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	4,625.9	4,725.7	4,825.9	4,926.4	5,026.9
Annual percentage change	2.2%	2.2%	2.1%	2.1%	2.0%
Household Employment					
Labor Force	1,984.9	2,024.6	2,040.2	2,076.1	2,115.8
Total Employment	1,866.6	1,921.8	1,948.8	1,985.8	2,033.3
Total Unemployment	118.3	102.8	84.7	78.1	82.5
Unemployment Rate	6.0%	5.1%	4.1%	3.8%	3.9%
Wage & Salary Employment					
Total Nonfarm	1,401.9	1,451.6	1,504.3	1,551.2	1,591.8
Goods Producing	191.5	196.6	205.0	213.5	220.0
Mining and Logging	0.9	0.9	0.9	0.9	1.0
Construction	92.0	97.0	104.2	108.8	114.9
Manufacturing	98.6	98.7	99.9	103.8	104.2
Durable Goods	64.4	63.9	65.5	68.5	68.6
Nondurable Goods	34.2	34.8	34.5	35.2	35.6
Service Providing	1,210.5	1,255.0	1,299.3	1,337.7	1,371.8
Trade, Transportation and Utilities	348.1	366.0	381.7	394.3	408.4
Wholesale Trade	62.8	63.7	66.6	65.3	66.0
Retail Trade	178.0	182.1	187.4	191.6	195.3
Transportation, Warehousing and Utilities	107.3	120.2	127.7	137.5	147.1
Information	11.5	11.3	11.0	11.0	11.0
Financial Activities	44.6	44.5	45.2	46.2	47.0
Professional and Business Services	145.0	147.2	153.9	155.3	157.1
Educational and Health Services	214.3	224.8	232.3	243.4	252.0
Leisure and Hospitality	160.2	165.7	170.1	177.3	181.9
Other Services	44.6	45.6	46.6	47.6	48.2
Government	242.3	250.0	258.3	262.6	266.2
Percentage change					
Total Nonfarm	3.6%	3.5%	3.6%	3.1%	2.6%
Goods Producing	4.6%	2.7%	4.3%	4.1%	3.1%
Mining and Logging	-27.9%	-0.9%	-1.9%	4.3%	1.9%
Construction	7.3%	5.5%	7.4%	4.4%	5.6%
Manufacturing	2.6%	0.1%	1.3%	3.9%	0.4%
Durable Goods	2.1%	-0.9%	2.5%	4.7%	0.0%
Nondurable Goods	3.5%	1.8%	-0.9%	2.2%	1.2%
Service Providing	3.5%	3.7%	3.5%	3.0%	2.5%
Trade, Transportation and Utilities	4.5%	5.2%	4.3%	3.3%	3.6%
Wholesale Trade	1.9%	1.4%	4.7%	-2.0%	1.0%
Retail Trade	2.2%	2.3%	2.9%	2.2%	1.9%
Transportation, Warehousing and Utilities	10.2%	12.1%	6.2%	7.6%	7.0%
Information	0.5%	-1.4%	-2.3%	-0.2%	-0.4%
Financial Activities	1.5%	-0.3%	1.7%	2.1%	1.8%
Professional and Business Services	-1.6%	1.5%	4.6%	0.9%	1.2%
Educational and Health Services	4.5%	4.9%	3.3%	4.8%	3.6%
Leisure and Hospitality	5.6%	3.5%	2.7%	4.2%	2.6%
Other Services	1.4%	2.2%	2.3%	2.1%	1.3%
Government	3.9%	3.2%	3.4%	1.7%	1.4%
Levels in millions					
Personal Income					
Personal Income	166.7	174.0	181.7	190.0	198.7
Annual percentage change	4.1%	4.4%	4.4%	4.6%	4.5%
Per capita income ($)	$36,027	$36,812	$37,642	$38,571	$39,519
Levels in billions					
Taxable Sales					
Total taxable sales	71.2	74.2	77.4	80.7	83.8
Year to year percentage change	4.3%	4.2%	4.3%	4.3%	3.8%

TABLE 6 - VENTURA COUNTY

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	849.7	859.3	868.8	878.3	887.8
Annual percentage change	0.2%	1.1%	1.1%	1.1%	1.1%
Household Employment					
Labor Force	426.7	426.1	425.9	428.7	432.4
Total Employment	404.4	407.0	408.0	410.5	412.7
Total Unemployment	22.3	19.2	16.4	15.9	16.4
Unemployment Rate	5.2%	4.5%	3.9%	3.7%	3.8%
Wage & Salary Employment					
Total Nonfarm	300.4	304.0	307.9	311.1	314.0
Goods Producing	46.1	47.0	48.2	49.7	53.5
Mining and Logging	0.9	0.9	0.9	0.9	1.0
Construction	14.6	15.7	16.8	18.0	22.6
Manufacturing	30.6	30.4	30.5	30.8	29.9
Durable Goods	18.6	18.4	18.7	19.1	18.3
Nondurable Goods	12.0	12.0	11.8	11.7	11.6
Service Providing	254.3	257.0	259.7	261.4	260.5
Trade, Transportation and Utilities	59.1	59.4	59.6	60.8	63.3
Wholesale Trade	13.1	13.3	13.3	13.7	15.5
Retail Trade	40.0	40.0	40.2	41.1	42.1
Transportation, Warehousing and Utilities	6.0	6.1	6.1	5.9	5.8
Information	5.0	5.0	4.9	4.8	4.7
Financial Activities	17.4	16.9	17.0	16.4	12.6
Professional and Business Services	35.9	36.5	36.6	36.8	37.2
Educational and Health Services	44.4	45.3	45.8	46.5	45.1
Leisure and Hospitality	36.4	37.3	38.9	40.4	45.5
Other Services	9.6	9.6	9.5	9.5	9.6
Government	46.6	46.9	47.4	46.2	42.4
Percentage change					
Total Nonfarm	1.3%	1.2%	1.3%	1.0%	0.9%
Goods Producing	0.9%	1.9%	2.6%	3.1%	7.6%
Mining and Logging	-12.2%	0.0%	0.1%	3.9%	1.8%
Construction	3.3%	7.2%	7.3%	6.9%	26.0%
Manufacturing	0.2%	-0.5%	0.3%	1.0%	-3.0%
Durable Goods	-1.2%	-1.0%	1.5%	2.3%	-4.4%
Nondurable Goods	2.3%	0.2%	-1.6%	-1.1%	-0.7%
Service Providing	1.4%	1.0%	1.1%	0.7%	-0.3%
Trade, Transportation and Utilities	1.0%	0.5%	0.3%	2.1%	4.1%
Wholesale Trade	3.5%	1.7%	0.4%	3.0%	12.6%
Retail Trade	0.2%	-0.0%	0.4%	2.4%	2.2%
Transportation, Warehousing and Utilities	1.0%	1.5%	-0.9%	-2.2%	-3.2%
Information	-1.6%	0.7%	-2.1%	-1.8%	-2.4%
Financial Activities	-1.9%	-2.7%	0.1%	-3.5%	-22.7%
Professional and Business Services	0.3%	1.8%	0.1%	0.5%	1.3%
Educational and Health Services	3.5%	2.0%	1.0%	1.5%	-3.0%
Leisure and Hospitality	1.9%	2.4%	4.5%	3.9%	12.5%
Other Services	-1.0%	0.3%	-0.6%	0.1%	1.3%
Government	2.6%	0.7%	1.1%	-2.7%	-8.2%
Levels in millions					
Personal Income					
Personal Income	47.4	49.5	51.7	54.0	56.5
Annual percentage change	2.4%	4.4%	4.4%	4.6%	4.6%
Per capita income ($)	$55,779	$57,574	$59,458	$61,525	$63,644
Levels in billions					
Taxable Sales					
Total taxable sales	13.7	14.3	14.9	15.4	15.9
Year to year percentage change	-0.3%	4.0%	3.9%	3.7%	3.0%

TABLE 7 - IMPERIAL COUNTY

	2016	2017	2018f	2019f	2020f
Levels in Thousands					
Population					
Total population	180.9	185.0	189.1	193.2	197.2
Annual percentage change	0.6%	2.3%	2.2%	2.2%	2.1%
Household Employment					
Labor Force	77.0	74.0	72.4	72.9	73.7
Total Employment	58.8	59.9	59.9	63.1	65.4
Total Unemployment	18.2	14.1	12.7	12.5	12.5
Unemployment Rate	23.6%	19.1%	17.5%	17.1%	17.0%
Wage & Salary Employment					
Total Nonfarm	52.2	53.2	54.3	54.9	55.1
Goods Producing	3.2	3.2	3.4	2.7	2.8
Mining, Logging, and Construction	1.8	1.8	2.0	1.8	1.8
Construction					
Manufacturing	1.4	1.4	1.4	0.9	1.0
Durable Goods	0.5	0.5	0.5	0.6	0.6
Nondurable Goods	0.9	0.9	0.9	0.4	0.4
Service Providing	49.0	50.0	50.9	52.1	52.3
Trade, Transportation and Utilities	12.3	12.5	12.2	12.3	12.3
Wholesale Trade	1.9	2.0	2.1	2.0	2.0
Retail Trade	8.0	8.0	7.9	7.9	7.9
Transportation, Warehousing and Utilities	2.4	2.5	2.1	2.4	2.4
Information	0.3	0.3	0.3	0.4	0.4
Financial Activities	1.4	1.3	1.2	1.4	1.4
Professional and Business Services	2.4	2.6	2.7	2.6	2.6
Educational and Health Services	9.2	9.5	10.0	10.4	10.2
Leisure and Hospitality	4.4	4.3	4.4	4.4	4.5
Other Services	0.9	1.0	1.0	1.0	1.0
Government	18.2	18.5	19.1	19.7	20.1
Percentage change					
Total Nonfarm	1.2%	2.0%	2.0%	1.0%	0.5%
Goods Producing	-13.9%	1.0%	4.8%	-19.3%	1.0%
Mining, Logging, and Construction	-28.8%	-0.9%	10.1%	-9.8%	-1.5%
Construction					
Manufacturing	18.7%	3.6%	-1.9%	-32.8%	5.8%
Durable Goods	0.0%	5.0%	-4.2%	11.6%	-1.9%
Nondurable Goods	32.9%	2.9%	-0.5%	-57.7%	17.2%
Service Providing	2.4%	2.1%	1.9%	2.4%	0.4%
Trade, Transportation and Utilities	1.6%	1.4%	-2.7%	1.2%	-0.1%
Wholesale Trade	4.2%	7.6%	6.3%	-4.9%	-2.0%
Retail Trade	-2.5%	-0.4%	-0.9%	-0.7%	0.2%
Transportation, Warehousing and Utilities	15.5%	2.4%	-15.6%	14.7%	0.5%
Information	0.0%	0.0%	4.1%	21.3%	-1.5%
Financial Activities	-7.4%	-4.3%	-6.9%	15.5%	-1.4%
Professional and Business Services	2.5%	10.3%	3.2%	-3.7%	1.4%
Educational and Health Services	4.8%	4.0%	5.1%	3.3%	-1.8%
Leisure and Hospitality	5.0%	-0.6%	1.9%	0.6%	0.4%
Other Services	3.0%	11.8%	6.7%	-1.1%	0.3%
Government	1.9%	1.3%	3.4%	2.9%	2.0%
Levels in millions					
Personal Income					
Personal Income	6.2	6.4	6.7	7.0	7.2
Annual percentage change	0.2%	4.0%	4.0%	4.2%	4.2%
Per capita income ($)	$34,122	$34,688	$35,306	$36,015	$36,751
Levels in billions					
Taxable Sales					
Total taxable sales	2.5	2.3	2.4	2.5	2.6
Year to year percentage change	-7.3%	-6.2%	4.5%	3.8%	3.3%

TABLE 8 - CONSTRUCTION AND REAL ESTATE ('000)

	2016	2017	2018f	2019f	2020f
Orange County					
Permits	12.1	9.5	8.0	8.1	8.5
Residential Valuation()	3,083.2	3,218.3	2,396.4	2,070.0	2,014.9
Non-residential Valuation()	2,452.5	2,017.8	4,137.3	3,578.3	3,235.3
Percentage Change					
Permits	5.7%	-21.4%	-15.9%	1.9%	3.9%
Residential Valuatiton	6.9%	4.4%	-25.5%	-13.6%	-2.7%
Non-residential Valuation	29.9%	-17.7%	105.0%	-13.5%	-9.6%
Los Angeles County					
Permits	19.9	22.0	30.5	29.5	27.0
Residential Valuation()	6,411.5	7,240.7	9,066.2	10,152.2	10,436.4
Non-residential Valuation()	5,149.1	5,767.7	6,930.7	5,754.3	5,559.9
Percentage Change					
Permits	-13.1%	10.4%	38.4%	-3.3%	-8.4%
Residential Valuatiton	1.2%	12.9%	25.2%	12.0%	2.8%
Non-residential Valuation	-4.7%	12.0%	20.2%	-17.0%	-3.4%
Riverside-San Bernardino Counties					
Permits	9.9	13.6	14.9	15.7	15.9
Residential Valuation()	2,509.5	3,127.5	3,913.9	4,094.5	4,071.0
Non-residential Valuation()	2,012.4	2,605.5	2,702.4	2,408.5	2,275.2
Percentage Change					
Permits	6.0%	36.7%	9.8%	5.2%	1.6%
Residential Valuatiton	5.4%	24.6%	25.1%	4.6%	-0.6%
Non-residential Valuation	10.2%	29.5%	3.7%	-10.9%	-5.5%
Ventura County					
Permits	1.5	2.3	1.2	1.1	1.0
Residential Valuation()	415.4	694.5	486.5	353.5	361.3
Non-residential Valuation()	179.3	230.8	330.2	173.4	169.2
Percentage Change					
Permits	74.4%	53.8%	-46.6%	-15.1%	-7.0%
Residential Valuatiton	28.1%	67.2%	-29.9%	-27.3%	2.2%
Non-residential Valuation	12.0%	28.7%	43.1%	-47.5%	-2.4%
Imperial County					
Permits	0.2	0.2	0.4	0.3	0.2
Residential Valuation()	62.7	41.5	75.0	97.3	108.9
Non-residential Valuation()	82.5	171.8	114.3	95.5	97.9
Percentage Change					
Permits	-41.8%	-11.1%	84.8%	-27.1%	-12.7%
Residential Valuatiton	17.7%	-33.9%	80.7%	29.8%	11.9%
Non-residential Valuation	76.5%	108.3%	-33.5%	-16.4%	2.5%
Southern California					
Permits	43.7	47.6	55.0	54.6	52.6
Residential Valuatiton	12,482.3	14,322.4	15,938.0	16,767.6	16,992.5
Non-residential Valuation	9,875.8	10,793.6	14,214.9	12,009.9	11,337.5
Percentage Change					
Permits	-2.9%	9.0%	15.5%	-0.6%	-3.7%
Residential Valuatiton	4.2%	14.7%	11.3%	5.2%	1.3%
Non-residential Valuation	5.9%	9.3%	31.7%	-15.5%	-5.6%

Sources: Number of housing permits and valuation data, in thousands, are from CCR